



STATE OF MINNESOTA

**Minnesota Pollution Control Agency**

**Industrial Division**

**National Pollutant Discharge Elimination System (NPDES)/  
State Disposal System (SDS) Permit MN0000256**

**PERMITTEE:** Saint Paul Park Refining Co LLC  
**FACILITY NAME:** Saint Paul Park Refining Co LLC  
**RECEIVING WATER:** Mississippi River (Class 2B,3C,4A,4B,5,6 water)

**CITY OR TOWNSHIP:** St. Paul Park      **COUNTY:** Washington  
**ISSUANCE DATE:** June 3, 2014      **EXPIRATION DATE:** May 31, 2019

The state of Minnesota, on behalf of its citizens through the Minnesota Pollution Control Agency (MPCA), authorizes the Permittee to construct, install and operate a disposal system at the facility named above and to discharge from this facility to the receiving water named above, in accordance with the requirements of this permit.

The goal of this permit is to reduce pollutant levels in point source discharges and protect water quality in accordance with Minnesota and U.S. statutes and rules, including Minn. Stat. chs. 115 and 116, Minn. R. chs. 7001, 7050, 7053, 7060, 7090, and the U.S. Clean Water Act.

This permit is effective on the issuance date identified above, and supersedes the previous permit that was issued for this facility on November 14, 2007. This permit expires at midnight on the expiration date identified above.

Signature: \_\_\_\_\_

Jeff Udd, P.E.  
Supervisor, Water Quality Permits Unit  
Water Section  
Industrial Division

for The Minnesota Pollution Control Agency

***Submit eDMRs***

Submit via the MPCA Online Services Portal at  
<https://netweb.pca.state.mn.us/private/>

***Submit Other WQ Reports to:***

Attention: WQ Submittals Center  
Minnesota Pollution Control Agency  
520 Lafayette Rd N  
St Paul, MN 55155-4194

***Questions on this permit?***

- For eDMR and other permit reporting issues, contact:  
Tamara Dahl, 507-476-4252.
- For specific permit requirements or permit compliance status, contact:  
Kaitlin Boutelle, 651-757-2306.
- General permit or NPDES program questions, contact:  
MPCA, 651-282-6143 or 1-800-657-3938.

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## Facility Description

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The St. Paul Park Refining Co LLC facility (Facility) is located at SW 1/4 of SW 1/4 of Section 1, Township 27 North, Range 22 West, St. Paul Park, Washington County, Minnesota.

It is owned and operated by St. Paul Park Refining Co. LLC. The Facility is located on the northwest city boundary of the city of Saint Paul Park, Minnesota, with a small portion of the Facility property extending into the city of Newport to the north. The western edge of the Facility is adjacent to the Mississippi River, with the main channel of the river running alongside the adjacent river bank. Within the river the Facility has a barge dock for private use in product transportation. On the eastern property edge is Interstate 10. The southern property edge is adjacent to Lion's Levee Park to the west as well as both residential and commercial areas. Within the boundaries there are non-direct refinery production areas including a firefighting practice area and several above ground storage tank facilities. **Figure 1** contains an air photo of the Facility and the surrounding area.

The Facility processes crude oil into gasoline, liquefied petroleum gases, fuel oils, turbine fuel, asphalt, road oil, and sulfur. The refinery increased the Facility's maximum processing capacity from 86,000 barrels per day (bbl/day) to 94,000 bbl/day as indicated in the prior permit. The Facility's five-year look back crude oil production rate (98<sup>th</sup> Percentile) is 90,000 bbl/day.

Process wastewaters, contaminated stormwater, non-contact cooling water, boiler blowdown, and groundwater pump out waters (contaminated groundwater) hydro test water, process wastewater, desalter effluent, neutralized demineralizer regenerates, caustic wastewater, water from firefighting activities, tank dike area storm water, bottom loading Facility stormwater and process wastewater, cooling tower water, and refinery lab waste are treated at the Facility's wastewater treatment plant ("WWTP").

Discharge of stormwater from the Facility is controlled by either this Permit or by the General Industrial Stormwater Permit (uniquely identified as MNR0534KZ). Stormwater originates from three general areas within the Facility: (1) the refinery process area, (2) lined tank containment areas within the refinery, and (3) the North Tank Farm, East Tank Farm, heavy oil tank containment areas, and other general refinery areas. These stormwater areas are shown on **Figure 2**. Stormwater from the refinery process area is collected and routed to the inlet of the WWTP system. Stormwater collected from lined tank secondary containment areas is routed to the lagoon through a segregated stormwater sewer system. Stormwater from the North Tank Farm, East Tank Farm, heavy oil tank containment areas and general refinery areas is discharged in accordance with the General Industrial Stormwater Permit. Prior to the discharge from any tank secondary containment area, impounded stormwater is visually inspected for the presence of contamination and is discharged if no observable contamination is present.

The WWTP currently consists of the following treatment units: prescreening, neutralization system, diversion Tank 146, velocity reduction/splitter box, American Petroleum Institute (API) oil/water separators, API solids tank (red box), API slop oil tank, flow equalization tanks, DGF Sludge Tanks (T-13/T-9), dissolved gas floatation units, submerged biological contactors (SBC), moving bed bioreactor (MBBR), evaporative air cooler, a lagoon partitioned for settling and aeration, multimedia sand filtration system, granular activated carbon system and back-up equipment to be used during maintenance, shutdowns or plant upset. **Figures 3 and 4** show the wastewater flow diagram for the existing Facility.

The final treated effluent from the WWTP is discharged from the granular activated carbon treatment system to the Mississippi River at surface discharge SD001 (Class 2B, 3C, 4A, 4B, 5, 6 water). The treated discharge is monitored by continuous flow, temperature, pH monitors and composite samplers located after the granular activated carbon treatment system. The Facility has a thermal effluent diffuser on the outlet pipe for SD001 located in the Mississippi River. Pursuant to MPCA approval of the diffuser design, the Facility is permitted to discharge thermal effluent at temperatures up to 105°F so long as the diffuser is utilized. The Facility is allowed to discharge wastewater at temperatures up to 95°F when the diffuser is not in use.

The Permittee installed additional piping so that the Facility may utilize half of the permanent sand and carbon filter systems to treat the SBC effluent during high benzene events, prior to discharging to the lagoon. **Figure 4** shows a flow diagram for this portion of the system. During high benzene events, 3 sand filters and 2 carbon filters will be used to treat the SBC effluent while the other 3 sand filters and 3 carbon filters will continue to treat the effluent to the river. When flow is directed to the filters, daily samples are taken and analyzed for chemical oxygen demand at SPPRC's onsite lab to monitor the condition of the filters and allow for proper maintenance of the filters.

The Facility has been and will continue to be allowed to make additional retrofit conversions of the existing SBCs to a MBBR system. The MPCA has previously determined that this conversion is a replacement-in-kind. This permit allows the Facility to convert the existing SBC units to MBBRs according to the Facility's schedule. The conditions for the retrofit conversions are detailed in Chapter 1 of this permit. However, once the Permittee installs and puts into service the proposed new biological treatment system for its WWTP (discussed below), this section of the permit will become obsolete and will no longer be applicable to the Facility. As the SBCs and MBBRs will be taken off line and will go through appropriate closure and removal.

In addition to the other limitations and requirements, the permit requires that the discharge be tested for acute toxicity on an annual basis. This is accomplished through bioassay test procedures described in the permit.

#### **PROPOSED FACILITY CHANGES:**

The Facility has proposed and MPCA has approved changes to the WWTP, including replacement of the current SBCs and installation of a new biological treatment system.

The new biological treatment system will include two covered aerators, two clarifiers diversion tank, sludge storage tank, effluent tank, and equipment for chemical addition of polymer and phosphoric acid. A flow diagram for the upgraded Facility is shown in **Figure 5**. This proposed system is considered a replacement-in-kind. Installation of the new biological treatment systems began following Facility's submittal of the permit re-issuance application and design plans. Changes to the lagoon operation and maintenance plan shall be made as the Facility changes are completed and become active. The new system is designed with the same as the current maximum wastewater treatment capacity of 2.858 million gallons per day (mgd).

Once this new system is fully operational the lagoon will not receive wastewater from the WWTP, but will continue to be used for storm water collection, tank hydrotest water discharges, and for available fire water needed to meet the Facility's emergency fire safety requirements. When influent flows to the lagoon are not sufficient to maintain necessary volumes of firefighting water, additional water may be added to the lagoon. The source of this water may include groundwater, well water, or fully treated effluent from the WWTP.

Following the discontinued use of the lagoon as part of the WWTP the Permittee will conduct a water balance test on the lagoon to determine if it maintains adequate seepage control (seepage < 3,500 gal/acre/day). Testing is conducted at facilities that have ponds/lagoons without adequate information to fully understand their construction and/or where there is insufficient influent and effluent data available to demonstrate seepage control. Due to the lack of adequate information on the lagoon, and because it will continue to contain wastewater sludge, the Permittee is required to submit a Pond Performance Evaluation Plan by 180 days after the permit issuance for MPCA review and approval. The permit contains requirements for the specific conditions to be incorporated into the testing plan. Approved testing is to be conducted within three and one half years of permit issuance. If the seepage rate is found to be greater than the allowable rate, or if a valid test cannot be completed due to unacceptable test conditions within the three and one-half year time frame, then the Facility will submit for review and approval a "Pond Restoration Plan." Reporting and testing requirements are provided in Chapter 4.

The location of the designated monitoring station is specified on the "Summary of Stations and Station Locations" on page 14. Attached aerial photo (Figure 1) shows the location of WWTP Monitoring Station (SD001) and the surface discharge point to the Mississippi River.

Limits and monitoring requirements are specified on the "Limits and Monitoring Requirements" section of the permit. Changes for the next permit cycle include additional sampling for several parameters. To address the downstream Lake Pepin lake/reservoir nutrient TMDL concerns, additional monitoring related parameters will include nitrate/nitrite, total Kjeldahl nitrogen, total dissolved solids (TDS), as well as setting a limit for total phosphorus. Quarterly monitoring for 13 individual forms of perfluorochemicals (PFCs) will be added to address past screening monitoring by the MPCA which indicated the presence of PFCs in the discharge. Chromium monitoring and limits (total chromium and Hexavalent Chromium) will be re-established in the permit in accordance with the Environmental Protection Agency established federal technology based effluent guideline which require a calculated limit and monitoring. Chromium monitoring had been discontinued due to the removal of the primary source of the chromium, a chemical additive used in cooling waters systems.

In accordance with MPCA rules regarding nondegradation for all waters that are not Outstanding Resource Value Waters, nondegradation review is required for any new or expanded significant discharge (Minn. R. 7050.0185). A significant discharge is: (1) a new discharge (not in existence before January 1, 1988) that is greater than 200,000 gallons per day to any water other than a Class 7 water or (2) an expanded discharge that expands by greater than 200,000 gallons per day that discharges to any water other than a Class 7 water or (3) a new or expanded discharge containing any toxic pollutant at a mass loading rate likely to increase the concentration of the toxicant in the receiving water by greater than one percent over the baseline quality. The flow rate used to determine significance is the design maximum daily flow. The January 1, 1988, calculated design maximum daily flow for this Facility is 2.858 mgd

This Permit also complies with Minn. R. 7053.0275 regarding anti-backsliding.

Any point source discharger of sewage, industrial, or other wastes for which a NPDES permit has been issued by the MPCA that contains effluent limits more stringent than those that would be established by Minn. R. 7053.0215 to 7053.0265 shall continue to meet the effluent limits established by the permit, unless the Permittee establishes that less stringent effluent limits are allowable pursuant to federal law, under section 402(o) of the Clean Water Act, United States Code, title 33, section 1342.

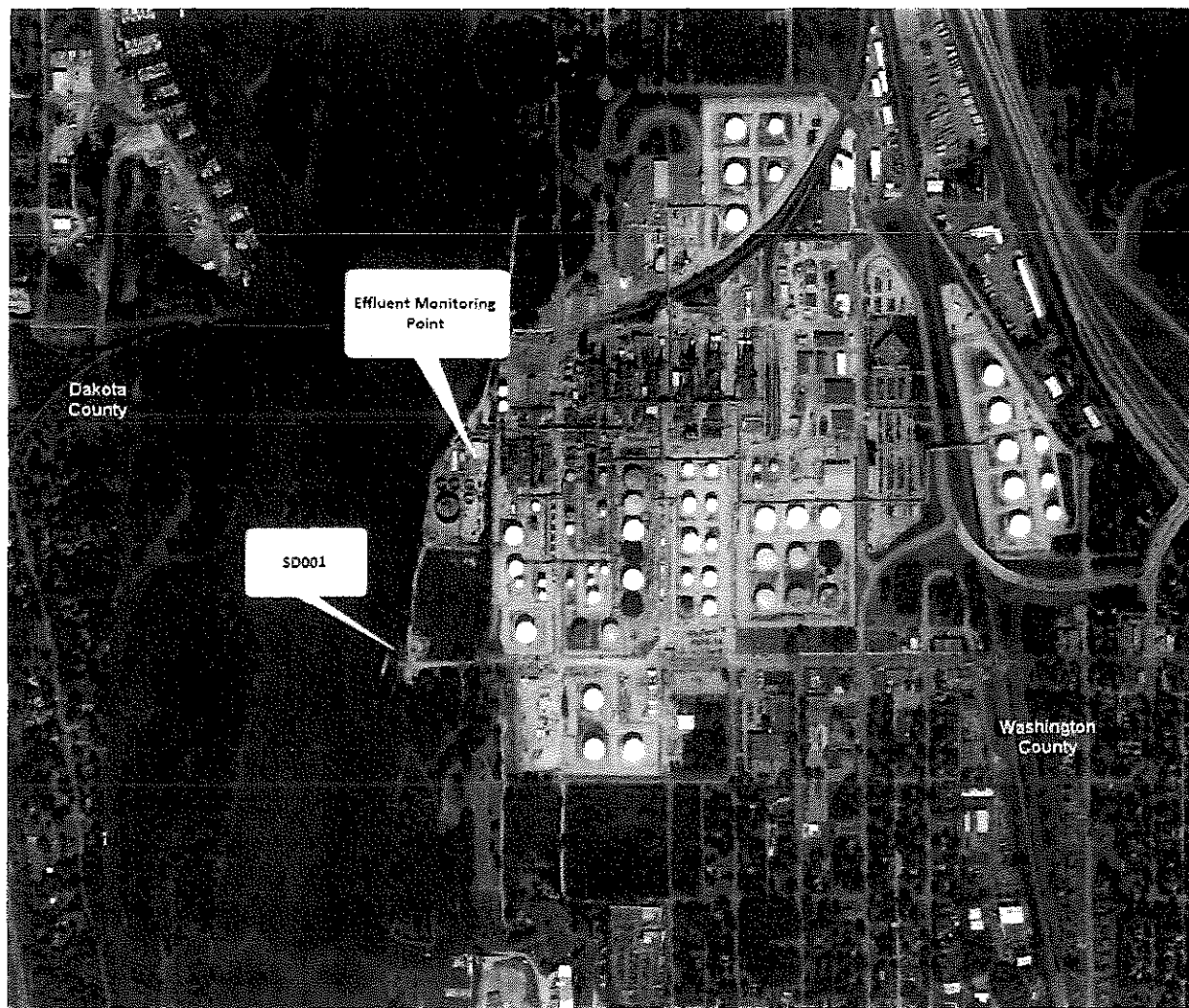
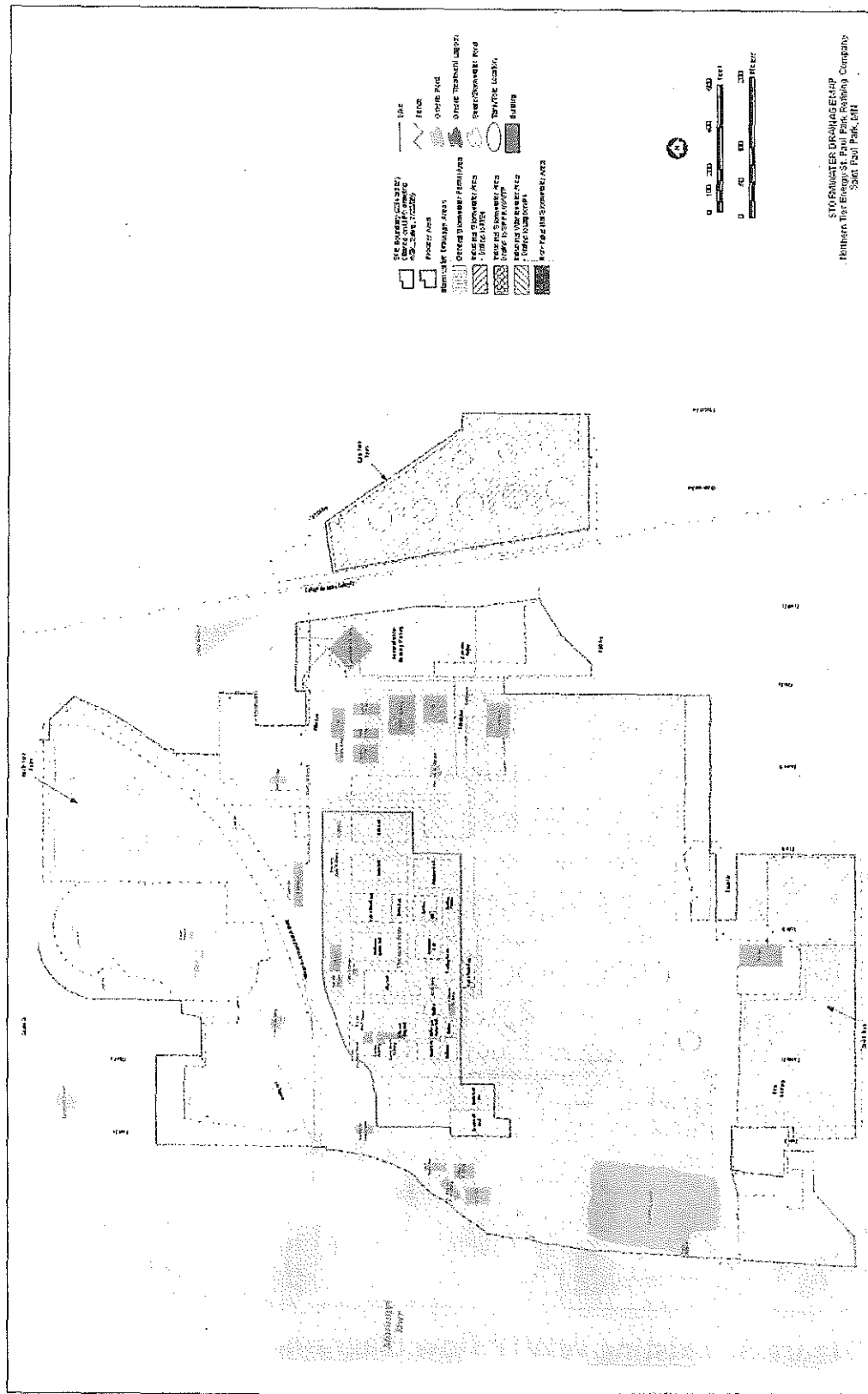
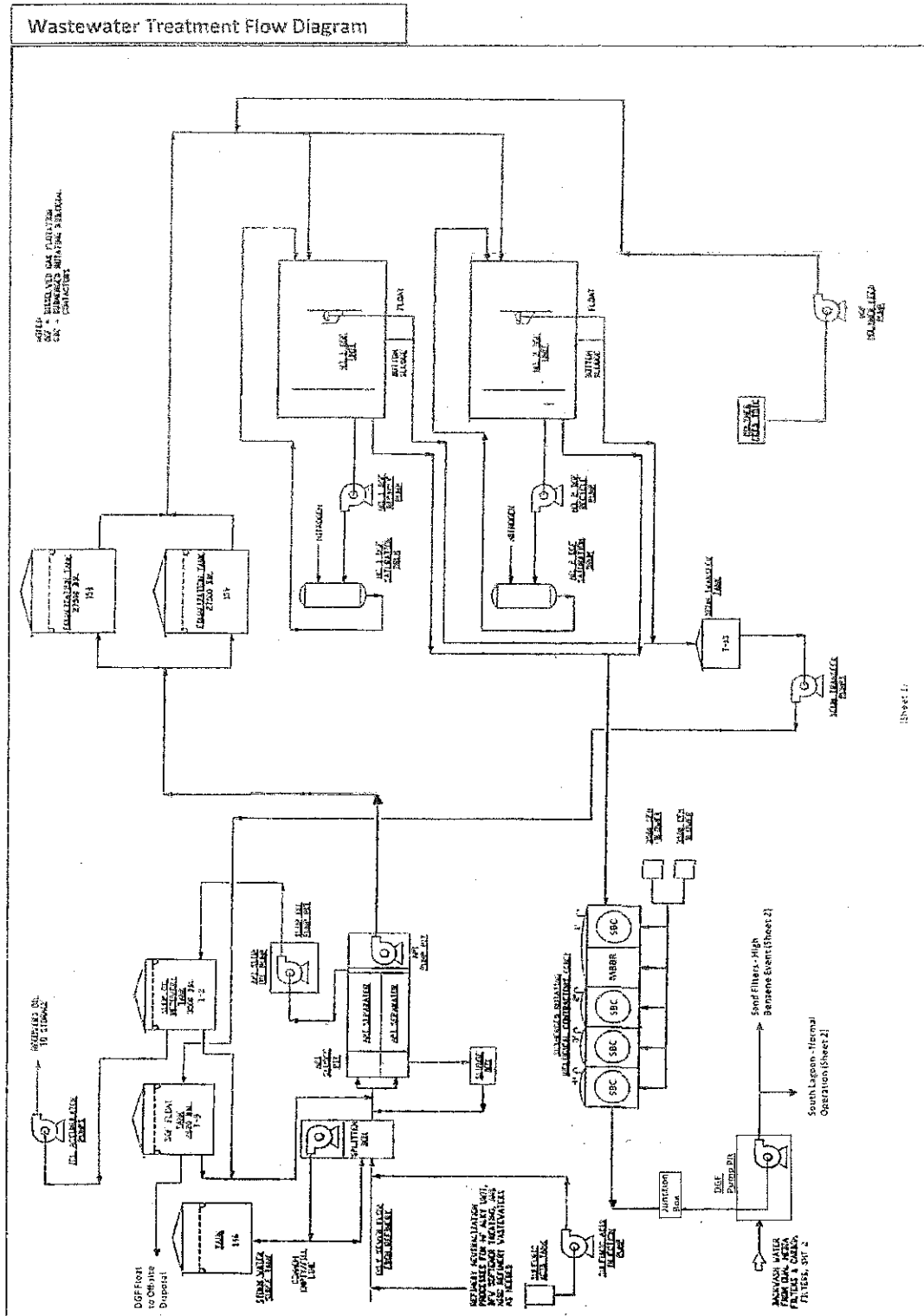


Figure 1. Air photo of the Facility and surrounding area.



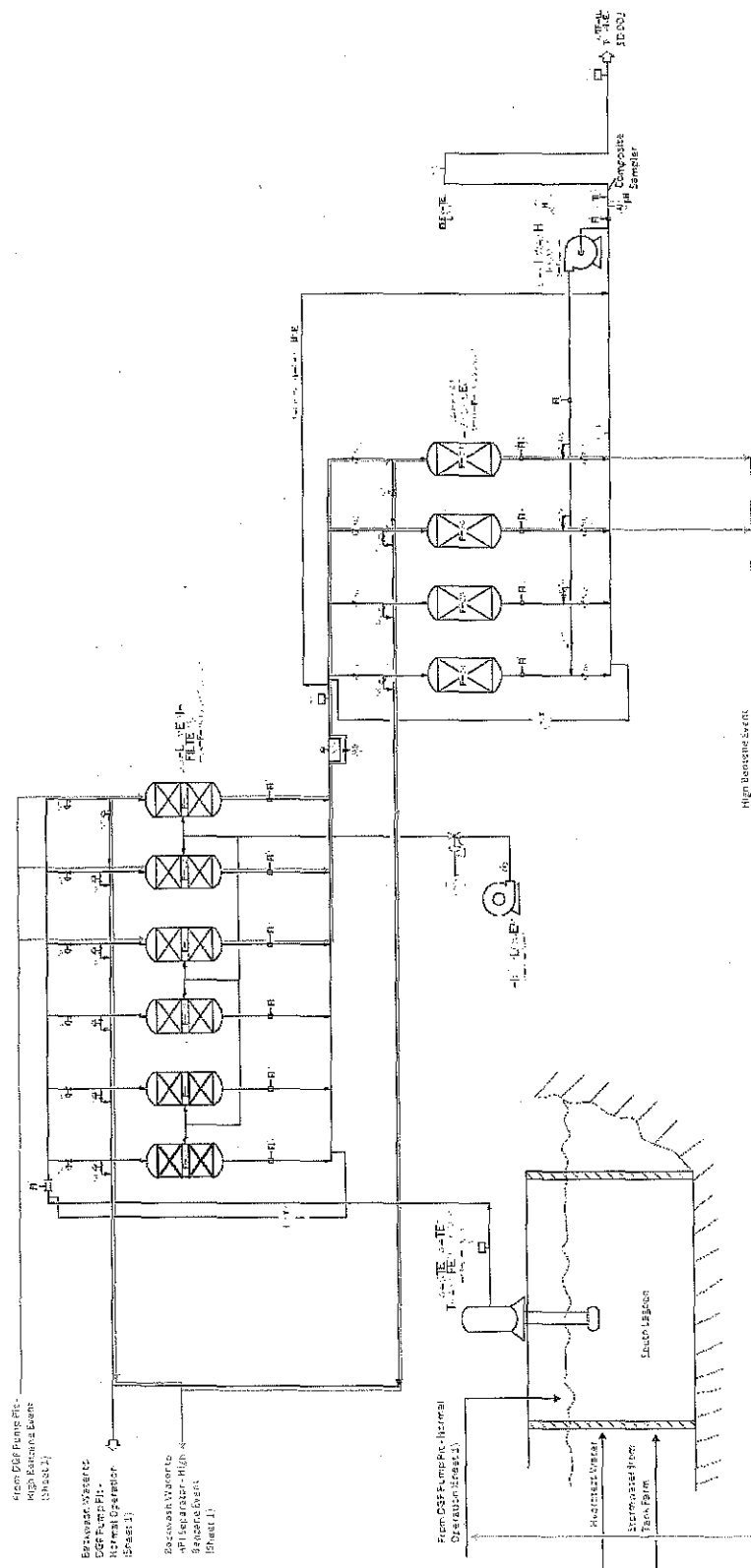


**Figure 2: Facility diagram with delineated stormwater areas.**

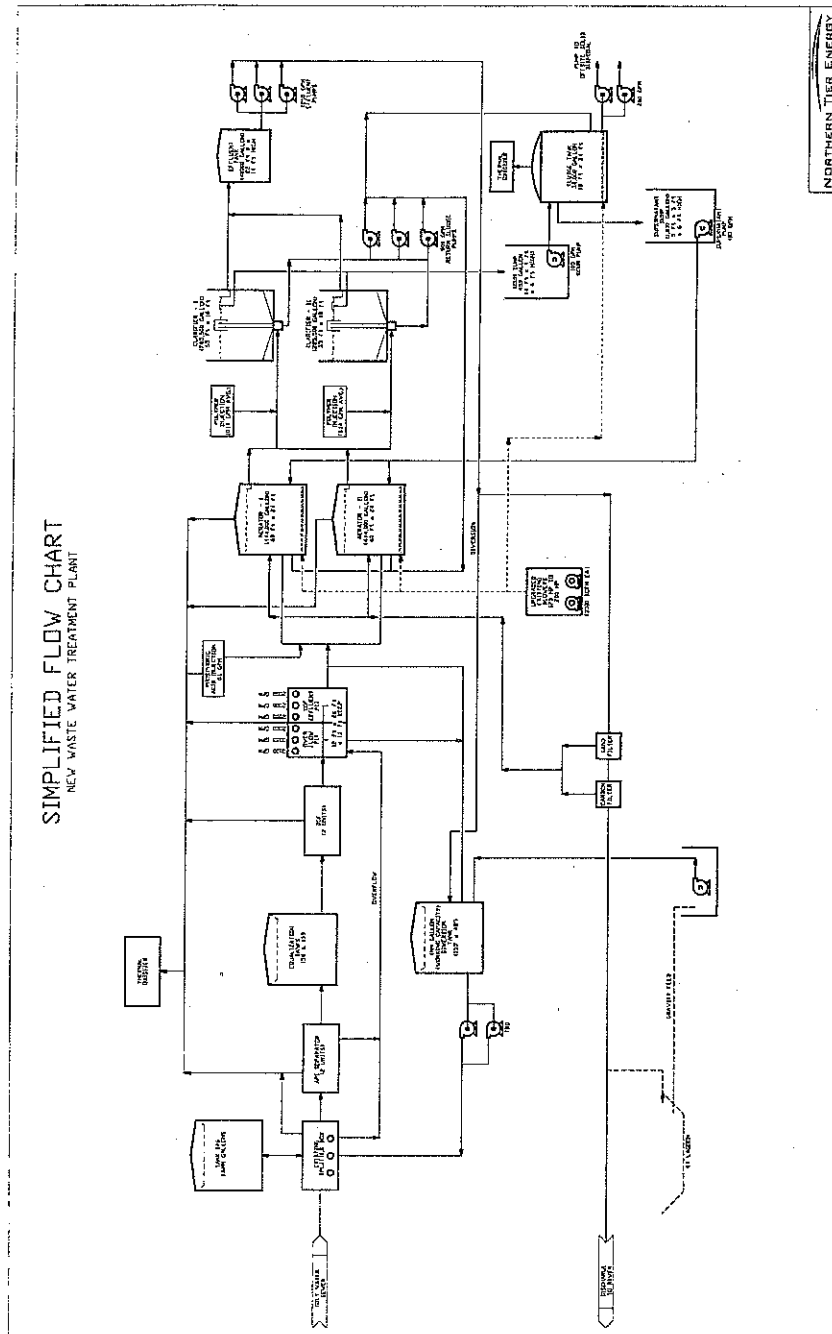


**Figure 3. Existing WWTP flow diagram.**

**Figure 4: Flow Schematic for Alternative Filter Flow Path**



**Figure 5: Proposed Facility Schematic**



**Saint Paul Park Refining Co LLC**  
**Summary of Stations**

**Surface Discharge Stations**

<u>Station</u>	<u>Type of Station</u>	<u>Local Name</u>	<u>PLS Location</u>
SD001	Effluent To Surface Water	Total Facility Discharge	SW Quarter of the SW Quarter of Section 1, Township 27 North, Range 22 West



**Saint Paul Park Refining Co LLC**  
**Limits and Monitoring Requirements**

The Permittee shall comply with the limits and monitoring requirements as specified below

**Period: Limits Applicable in the Interim Period**

SD 001: Total Facility Discharge

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Acute Toxicity Testing	.9999	TUa	Annual WET Testing	Jan-Dec, effective October 01, 2014	24-Hour Flow Composite	1 x Year	
Acute Toxicity Testing	.9999	TUa	Quarterly WET Testing	Jan-Dec, effective July 01, 2014	24-Hour Flow Composite	1 x Quarter	
BOD, 05 Day (20 Deg C)	186.0	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	3 x Week	
BOD, 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	3 x Week	
BOD, 05 Day (20 Deg C)	369.0	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	3 x Week	
Chromium, Hexavalent (as Cr)	0.25	kg/day	Calendar Month Average	Feb, May, Aug, Nov	24-Hour Flow Composite	2 x Month	5
Chromium, Hexavalent (as Cr)	0.55	kg/day	Daily Maximum	Feb, May, Aug, Nov	24-Hour Flow Composite	2 x Month	5
Chromium, Total (as Cr)	2.91	kg/day	Calendar Month Average	Feb, May, Aug, Nov	24-Hour Flow Composite	2 x Month	5
Chromium, Total (as Cr)	8.36	kg/day	Daily Maximum	Feb, May, Aug, Nov	24-Hour Flow Composite	2 x Month	5
COD (Chemical Oxygen Demand)	1495.0	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	3 x Week	
COD (Chemical Oxygen Demand)	2887.0	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	3 x Week	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Continuous	1 x Day	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement, Continuous	1 x Day	
Flow	Monitor Only	mgd	Daily Maximum	Jan-Dec	Measurement, Continuous	1 x Day	
Mercury, Dissolved (as Hg)	Monitor Only	ng/L	Daily Maximum	Jan-Dec	Grab	2 x Month	6
Mercury, Total (as Hg)	10	ng/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	6
Mercury, Total (as Hg)	18	ng/L	Daily Maximum	Jan-Dec	Grab	2 x Month	6
Nitrite Plus Nitrate, Total (as N)	Monitor Only	mg/L	Daily Maximum	Apr, Sep	24-Hour Flow Composite	1 x Month	
Nitrogen, Ammonia, Total (as N)	108.0	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	3 x Week	
Nitrogen, Ammonia, Total (as N)	238.0	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	3 x Week	
Nitrogen, Ammonia, Un-ionized (as N)	0.46	mg/L	Daily Maximum	Jan-Dec	Calculation	3 x Week	7
Nitrogen, Kjeldahl, Total	Monitor Only	mg/L	Daily Maximum	Apr, Sep	24-Hour Flow Composite	1 x Month	
Oil & Grease, Total Recoverable (Hexane Extraction)	63.0	kg/day	Calendar Month Average	Jan-Dec	Grab	3 x Week	
Oil & Grease, Total Recoverable (Hexane Extraction)	118.0	kg/day	Daily Maximum	Jan-Dec	Grab	3 x Week	
Oil & Grease, Total Recoverable (Hexane Extraction)	10	mg/L	Daily Maximum	Jan-Dec	Grab	3 x Week	
PFBA (perfluorobutanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
PFBS (perfluorobutane sulfonate)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	2
PFDA (perfluorodecanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1

# **Saint Paul Park Refining Co LLC** **Limits and Monitoring Requirements**

The Permittee shall comply with the limits and monitoring requirements as specified below

**Period: Limits Applicable in the Interim Period**

**SD 001: Total Facility Discharge**

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
PFD <sub>o</sub> A (perfluorododecanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
PFH <sub>p</sub> A (perfluoroheptanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
PFH <sub>x</sub> A (perfluorohexanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
PFH <sub>x</sub> S (perfluorohexane sulfonate)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	2
PFNA (perfluorononanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
PFOA (perfluorooctanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
PFOS (perfluorooctane sulfonate)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	2
PFOSA (perfluorooctane sulfonamide)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
PFPeA (perfluoropentanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
PFUnA (perfluoroundecanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Measurement, Continuous	1 x Day	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Measurement, Continuous	1 x Day	
Phenol	2214	ug/L	Daily Maximum	Jan-Dec	24-Hour Flow Composite	1 x Week	3
Phenols, Total	2.4	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Week	4
Phenols, Total	6.77	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	1 x Week	4
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Month	
Selenium, Total (as Se)	Monitor Only	ug/L	Daily Maximum	Jan-Dec	24-Hour Flow Composite	1 x Quarter	
Solids, Total Dissolved (TDS)	Monitor Only	mg/L	Daily Maximum	Apr, Sep	24-Hour Flow Composite	1 x Month	
Solids, Total Suspended (TSS)	172.0	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	3 x Week	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	3 x Week	
Solids, Total Suspended (TSS)	269.0	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	3 x Week	
Solids, Total Suspended (TSS), grab (Mercury)	Monitor Only	mg/L	Daily Maximum	Jan-Dec	Grab	2 x Month	6
Sulfide, Total (as S)	1.0	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Week	
Sulfide, Total (as S)	2.4	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	1 x Week	
Temperature, Water (F)	105.0	Deg F	Daily Maximum	Jan-Dec	Measurement, Continuous	1 x Day	8
Zinc, Total (as Zn)	421	ug/L	Daily Maximum	Jan-Dec	24-Hour Flow Composite	1 x Quarter	



# **Saint Paul Park Refining Co LLC** **Limits and Monitoring Requirements**

The Permittee shall comply with the limits and monitoring requirements as specified below

**Period:** *Limits Applicable in the Final Period*

**SD 001: Total Facility Discharge**

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Acute Toxicity Testing	.9999	TUa	Annual WET Testing	Jan-Dec, effective October 01, 2014	24-Hour Flow Composite	1 x Year	
Acute Toxicity Testing	.9999	TUa	Quarterly WET Testing	Jan-Dec, effective July 01, 2014	24-Hour Flow Composite	1 x Quarter	
BOD, 05 Day (20 Deg C)	186.0	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	3 x Week	
BOD, 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	3 x Week	
BOD, 05 Day (20 Deg C)	369.0	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	3 x Week	
Chromium, Hexavalent (as Cr)	0.25	kg/day	Calendar Month Average	Feb, May, Aug, Nov	24-Hour Flow Composite	2 x Month	5
Chromium, Hexavalent (as Cr)	0.55	kg/day	Daily Maximum	Feb, May, Aug, Nov	24-Hour Flow Composite	2 x Month	5
Chromium, Total (as Cr)	2.91	kg/day	Calendar Month Average	Feb, May, Aug, Nov	24-Hour Flow Composite	2 x Month	5
Chromium, Total (as Cr)	8.36	kg/day	Daily Maximum	Feb, May, Aug, Nov	24-Hour Flow Composite	2 x Month	5
COD (Chemical Oxygen Demand)	1495.0	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	3 x Week	
COD (Chemical Oxygen Demand)	2887.0	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	3 x Week	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Continuous	1 x Day	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement, Continuous	1 x Day	
Flow	Monitor Only	mgd	Daily Maximum	Jan-Dec	Measurement, Continuous	1 x Day	
Mercury, Dissolved (as Hg)	Monitor Only	ng/L	Daily Maximum	Jan-Dec	Grab	2 x Month	6
Mercury, Total (as Hg)	10	ng/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	6
Mercury, Total (as Hg)	18	ng/L	Daily Maximum	Jan-Dec	Grab	2 x Month	6
Nitrite Plus Nitrate, Total (as N)	Monitor Only	mg/L	Daily Maximum	Apr, Sep	24-Hour Flow Composite	1 x Month	
Nitrogen, Ammonia, Total (as N)	108.0	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	3 x Week	
Nitrogen, Ammonia, Total (as N)	238.0	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	3 x Week	
Nitrogen, Ammonia, Un-ionized (as N)	0.46	mg/L	Daily Maximum	Jan-Dec	Calculation	3 x Week	7
Nitrogen, Kjeldahl, Total	Monitor Only	mg/L	Daily Maximum	Apr, Sep	24-Hour Flow Composite	1 x Month	
Oil & Grease, Total Recoverable (Hexane Extraction)	63.0	kg/day	Calendar Month Average	Jan-Dec	Grab	3 x Week	
Oil & Grease, Total Recoverable (Hexane Extraction)	118.0	kg/day	Daily Maximum	Jan-Dec	Grab	3 x Week	
Oil & Grease, Total Recoverable (Hexane Extraction)	10	mg/L	Daily Maximum	Jan-Dec	Grab	3 x Week	
PFBA (perfluorobutanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
PFBS (perfluorobutane sulfonate)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	2
PFDA (perfluorodecanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1

# **Saint Paul Park Refining Co LLC** **Limits and Monitoring Requirements**

The Permittee shall comply with the limits and monitoring requirements as specified below

**Period:** *Limits Applicable in the Final Period*

**SD 001: Total Facility Discharge**

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
PFDaA (perfluorododecanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
PFHpA (perfluoroheptanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
PFHxA (perfluorohexanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
PFHxS (perfluorohexane sulfonate)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	2
PFNA (perfluorononanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
PFOA (perfluorooctanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
PFOS (perfluorooctane sulfonate)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	2
PFOSA (perfluorooctane sulfonamide)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
PFPeA (perfluoropentanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
PFUnA (perfluoroundecanoic acid)	Monitor Only	ng/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	1
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Measurement, Continuous	1 x Day	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Measurement, Continuous	1 x Day	
Phenol	2214	ug/L	Daily Maximum	Jan-Dec	24-Hour Flow Composite	1 x Week	3
Phenols, Total	2.4	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Week	4
Phenols, Total	6.77	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	1 x Week	4
Phosphorus, Total (as P)	1515	kg/yr	12 Month Moving Total	Jan-Dec	24-Hour Flow Composite	1 x Month	9
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Month	
Phosphorus, Total (as P)	Monitor Only	kg/mo	Calendar Month Total	Jan-Dec	24-Hour Flow Composite	1 x Month	
Selenium, Total (as Se)	Monitor Only	ug/L	Daily Maximum	Jan-Dec	24-Hour Flow Composite	1 x Quarter	
Solids, Total Dissolved (TDS)	Monitor Only	mg/L	Daily Maximum	Apr, Sep	24-Hour Flow Composite	1 x Month	
Solids, Total Suspended (TSS)	172.0	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	3 x Week	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	3 x Week	
Solids, Total Suspended (TSS)	269.0	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	3 x Week	
Solids, Total Suspended (TSS), grab (Mercury)	Monitor Only	mg/L	Daily Maximum	Jan-Dec	Grab	2 x Month	6
Sulfide, Total (as S)	1.0	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Week	
Sulfide, Total (as S)	2.4	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	1 x Week	
Temperature, Water (F)	105.0	Deg F	Daily Maximum	Jan-Dec	Measurement, Continuous	1 x Day	8
Zinc, Total (as Zn)	421	ug/L	Daily Maximum	Jan-Dec	24-Hour Flow Composite	1 x Quarter	

**Saint Paul Park Refining Co LLC**  
**Limits and Monitoring Requirements**

The Permittee shall comply with the limits and monitoring requirements as specified below

Notes:

- 1 -- Aqueous Report Level of 2.50 ng/L.
- 2 -- Aqueous Report Level of 5.00 ng/L.
- 3 -- Phenol refers to the individual phenol compound analyzed by EPA method 625
- 4 -- Phenols, total refers to phenols analyzed by the analytical procedure using the 4-aminoantipyrine colorimetric method that determines phenol, ortho and meta substituted phenols and, under proper pH conditions certain para substituted phenols.
- 5 -- Sampling shall be conducted 2 times in the given month of the quarter.
- 6 -- See Chapter 1, Section 6 for Mercury Limits and Monitoring Requirements.
- 7 -- See Chapter 1, Section 4, 4.5 to 4.7, for unionized ammonia calculation and restrictions of pH adjustment for unionized ammonia compliance.
- 8 -- See additional temperature limitations and monitoring requirements in Chapter 1, Section 4, 4.1 to 4.4.
- 9 -- The TP load limit becomes active 90 days after the full flow of the WWTP has been diverted from the SBCs/MBBR to the new activated sludge system. (See Ch. 2, Section 1.7)



## **Chapter 1. Surface Discharge Stations**

### **1. Sampling Location**

- 1.1 Samples for Station SD001 shall be taken at the discharge from the wastewater treatment system (effluent from the granular activated carbon units).
- 1.2 Samples and measurements required by this permit shall be representative of the monitored activity.

### **2. Surface Discharges**

- 2.1 Floating solids or visible foam shall not be discharged in other than trace amounts.
- 2.2 Oil or other substances shall not be discharged in amounts that create a visible color film.
- 2.3 The Permittee shall install and maintain outlet protection measures at the discharge stations to prevent erosion.

### **3. Discharge Monitoring Reports**

- 3.1 The Permittee shall submit monitoring results for discharges in accordance with the limits and monitoring requirements for this station. If no discharge occurred during the reporting period, the Permittee shall check the "No Discharge" box on the Discharge Monitoring Report (DMR).

### **4. Special Requirements**

#### **Thermal Effluent Discharge**

- 4.1 The Permittee installed a 4-port effluent diffuser for the purpose of obtaining better end-of-pipe mixing for the thermal discharge.
- 4.2 The maximum daily temperature for discharge of thermal effluent shall not exceed 105 °F when discharged through the diffuser.
- 4.3 If the diffuser is not operational, the following conditions shall apply to discharges of thermal effluent via SD001:
  1. The Permittee shall notify the MPCA prior to discharging any effluent without the use of the diffuser. Notification shall include the reason for discharge without use of the diffuser, and the anticipated duration of discharge.
  2. The maximum daily temperature of the effluent shall not exceed 95 °F.
  3. Records of the discharge shall be retained, indicating the time that the diffuser was taken offline, the duration of discharge without use of the effluent diffuser, and all temperature data collected during the discharge. These records shall be subject to the requirements of Chapter 9, Parts 1.27 and 1.33 of this permit.
- 4.4 With the exception of a discharge through an MPCA approved diffuser, the discharge of heated effluent at temperatures greater than 95°F is not permitted.

#### **Unionized Ammonia**

- 4.5 The daily maximum unionized ammonia concentration shall not exceed 0.46 mg/L in SD001 and shall be calculated using the total ammonia concentration results (as N) obtained in the 24 hour composite sample, the median pH is defined as the median pH value for the 24 hour period based on continuous pH monitoring as required by this permit. Hourly pH readings, as the maximum increment, shall be used to determine the pH median. The unionized ammonia concentration shall be determined in accordance with the formula described for calculation of unionized ammonia in Minnesota Rule Chapter 7050.0222 Specific Standards for Quality and Purity for Class 2 Waters of the State; Aquatic Life and Recreation.

## **Chapter 1. Surface Discharge Stations**

### **4. Special Requirements**

- 4.6 The pH of the SD001 discharge shall not be adjusted as a routine practice for the purpose of meeting the daily maximum unionized ammonia limitation of 0.46 mg/l. However, upon verbal approval by MPCA staff, the pH of the discharge may be adjusted in extreme circumstances when a combination of high water temperatures and pH (driven by algal blooms in the WWTP lagoons) causes the unionized ammonia concentration to approach the effluent limit of 0.46 mg/l.
- 4.7 The pH of the discharge may be adjusted for the purpose of meeting the pH limitations of the permit of 6.0 to 9.0 in the event that adjustment is required for this purpose. pH adjustments at the wastewater treatment plant, or in the wastewater influent to the wastewater treatment plant, may be made as needed in order to provide for adequate wastewater treatment, including all unit operations where pH adjustment is normally required to optimize pollutant removal.

#### **Perfluorochemicals (PFCs)**

## **Chapter 1. Surface Discharge Stations**

### **4. Special Requirements**

- 4.8 The Permittee is responsible for monitoring the PFCs specified by the Limits and Monitoring section of the permit. As long as the cost of analysis for additional PFC analytes is the same as the cost for the required PFC analytes, the Permittee shall request that additional PFC analytes to be analyzed, with results reported to the Permittee. The Permittee shall submit laboratory sheets for all PFC analytes to the MPCA with the DMR for the respective sampling and reporting event.
- 4.9 The monitoring and analysis shall be consistent with the May 2010 MPCA guidance titled, "Guidance for Perfluorochemical Analysis" and the accompanying audit checklist titled "Analysis of perfluorinated chemicals by HPLC/MS-MS, Minnesota Pollution Control Agency Audit Checklist". Use of a laboratory meeting the criterion of this part shall constitute compliance with Total Facility Chapter, part 1.24 of the permit.
- 4.10 PFC results shall be sampled quarterly and submitted with the December DMR. The Permittee must submit copies of the laboratory sheets for the PFC analytes with the DMRs.

#### **Firewater Use and Management**

- 4.11 The Permittee's fire protection system (fire hydrants, hoses, equipment and fire safety operations) shall not be used to dispose of any wastewaters except as authorized and approved by the MPCA. Lagoon/Pond water may be used as fire protection system water during the Permittee's fire readiness procedures, during work activities in which fire safety precautions or on-guard fire safety protection is necessary, during fire safety training and in the event of an emergency.

## **Chapter 1. Surface Discharge Stations**

### **4. Special Requirements**

#### **Change in Discharge**

- 4.12 All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such a violation may result in the imposition of civil or criminal penalties as provided for in Section 309 of the Act, Minnesota Statute 115.071.
- 4.13 The Permittee shall give notice to the Commissioner of any planned physical alterations or additions to its petroleum refinery if one of the following criteria applies:
- a. The alteration or addition may meet one of the criteria for determining whether the altered or additional facility is a new source under 40 CFR Section 122-29.
  - b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged.

Upon receipt of notice of such alteration or addition to the petroleum refinery, the Commissioner may commence a permit modification in accordance with MPCA rules.

- 4.14 Any anticipated change in the facility discharge, including any facility expansions, production increases, process modifications, new or modified industrial discharges, or change in the quality of existing industrial discharges to the treatment system that may result in a new or increased discharge of pollutants shall be reported to the Commissioner. Modification to the permit may then be made to reflect any necessary change in permit conditions, including any necessary effluent limitations for any pollutant identified and limited herein.

#### **Moving Bed Bioreactor Retrofits**

- 4.15 During the last permit cycle the Permittee requested and received authorization to complete a retrofit conversion of the #2 submerged biological contactor (SBC) treatment unit to a moving bed bioreactor (MBBR) unit. This type of retrofit is believed to be a replacement in kind, and does not alter the treatment process. Therefore, the proposed conversion does not require alternative permit conditions or effluent limitations pursuant to Parts 4.13-4.14 of this chapter.
- 4.16 The Permittee may be authorized to complete retrofit conversions of the remaining SBC units to MBBR units throughout the remaining life of this permit in accordance with the terms in Parts 4.17-4.18 of this chapter, or until the proposed activated sludge and clarifier systems are put into use. Upon the completion of the installation and start-up of the activated sludge and clarifier systems, the SBC units and MBBR systems will need to be taken off line and closed.
- 4.17 Prior to initiating construction on future MBBR conversions, the Permittee shall submit notification for MPCA review and approval. The notification must satisfy the following requirements:
1. Identify the reason for the proposed conversion.
  2. Propose a timeframe for completion of conversion.
  3. Identify any differences between the proposed conversion and the approved plans for conversion of the #2 SBC unit noted in Part 4.15 of this Chapter. The basis for these differences must be provided, along with any supporting technical documentation.



## Chapter 1. Surface Discharge Stations

### 4. Special Requirements

- 4.18 The Permittee shall not initiate construction on retrofits proposed under Part 4.16 of this Chapter without written authorization from the MPCA, pursuant to Chapter 9, Part 1.51 of this Permit.

If MPCA review of a proposal that is submitted pursuant to Part 4.16 of this Chapter indicates that a major permit modification is necessary, the Permittee shall submit an application for a permit modification pursuant to Chapter 9, Part 1.50 of this Permit.

#### Additional Piping

- 4.19 The Permittee had elected to install additional piping for the purpose of allowing additional treatment of the discharges from the submerged biological contactor under conditions of high benzene levels. Piping was installed to connect the SBC outfall to two of the multi-media filters and three of the carbon filters. Use of the modified flow and treatment sequence would be conducted only when high benzene levels are observed. The design and implementation plan was submitted to the MPCA for review on April 12, 2011, and approved by the MPCA on June 28, 2011. The construction was reported to be completed on August 16, 2011.
- 4.20 During periods of high benzene level in the wastewater, and the use of the modified WWTP flow diversion to the filters, the Permittee shall conduct additional daily sampling for chemical oxygen demand. These results provide the necessary monitoring of the filter media condition and as needed the Permittee shall conduct any additional maintenance of the filters as required.

### 5. Requirements for Specific Stations

- 5.1 SD 001: Submit a monthly DMR monthly by 21 days after the end of each calendar month following permit issuance.

### 6. Phosphorus Limits and Monitoring Requirements

- 6.1 Phosphorus limits are to be calculated as follows.
- 6.2 "12-Month Moving Total" is a rolling total. For the first 11 months after this limit is effective, report the mass phosphorus discharged by calculating each month's kg/month, then adding each month's kg/month from the first month the new limit is effective through the 11th month after this limit became effective. This value should be reported on the eDMR in the 12-Month Moving Total field. If using the eDMR calculator tool, replace the calculated value with this value. Starting the 12th month after this limit became effective and thereafter, calculate each kg/month then add all of the monthly values (kg/mo) during the last twelve months, starting with the monthly total for the month of the current reporting period. Calculate kg/month for each month by multiplying the total volume of effluent flow (MG) by the monthly average concentration and by a 3.785 conversion factor to get kg/month. Starting the 12th month after this limit became effective and thereafter, the eDMR calculator tool will provide the correct value for this limit.

### 7. Mercury Limits and Monitoring Requirements

- 7.1 Permittees are required to sample for TSS (grab sample) at the same time that Total/Dissolved Mercury samples are taken. Total Mercury, Dissolved Mercury, and TSS (grab sample) samples must be collected via grab samples. All results must be recorded on DMRs.
- 7.2 Total and Dissolved Mercury samples must be analyzed using the most current versions of EPA Method 1631 with clean techniques method 1669. Should another mercury analytical method that has a reportable quantitation level of <0.5 ng/L that allows for low-level sample characterization be approved by the EPA and certified by an MPCA recognized accreditation body, the method may be used in place of 1631/1669.
- 7.3 Mercury monitoring and a concurrent TSS grab sample are required twice a month. Samples collected for a Calendar Month Average limit type must be collected in the same month.

## **Chapter 2. Special Requirements**

### **1. Construction Schedule**

- 1.1 "Initiation of operation" means the date that MPCA determines all components of the the wastewater treatment system are complete and functioning and the project begins operating for the purposes for which it was planned, designed, and built.

#### **Definitions**

- 1.2 "Completion of construction" means all the construction is complete except for minor weather-related components and conforms to the approved plans and specifications and change orders.
- 1.3 "Notice to proceed" means a written notice given by the Permittee to the contractor that affixes the contract effective date and the date that the contractor begins performing the work specified in the contract documents.

## **Chapter 2. Special Requirements**

### **1. Construction Schedule**

#### **Schedule**

- 1.4 The requirements below are related to the construction of the upgraded biological treatment system which includes the activated sludge system, clarifier systems, and supporting equipment.
- 1.5 Submit notice of completion of construction: The Permittee shall notify the MPCA when the construction of the new system is complete. Construction of the replacement of the biological treatment system shall be completed within eight months of the issuance of the permit.
- 1.6 Submit Initiation of Operation Date. The Permittee must notify the MPCA in writing within 7 days after the actual initiation of operation date.
- 1.7 Attain compliance with the final limits by 90 days after initiation of operation, and no later than one year after the issuance of the permit.
- 1.8 Submit as-built drawings by 365 days after initiation of operation.

## **Chapter 3. Industrial Process Wastewater**

### **1. Prohibited Discharges**

- 1.1 This permit does not authorize the discharge of sewage, wash water, scrubber water, spills, oil, hazardous substances, or equipment/vehicle cleaning and maintenance wastewaters to ditches, wetlands or other surface waters of the state.
- 1.2 The Permittee shall prevent the routing of pollutants from the facility to a municipal wastewater treatment system in any manner unless authorized by the pretreatment standards of the MPCA and the municipal authority.
- 1.3 The Permittee shall not transport pollutants to a municipal wastewater treatment system that will interfere with the operation of the treatment system or cause pass-through violations of effluent limits or water quality standards.

### **2. Toxic Substance Reporting**

- 2.1 The Permittee shall notify the MPCA immediately of any knowledge or reason to believe that an activity has occurred that would result in the discharge of a toxic pollutant listed in Minnesota Rules, pt. 7001.1060, subp. 4 to 10 or listed below that is not limited in the permit, if the discharge of this toxic pollutant has exceeded or is expected to exceed the following levels:
  - a. for acrolein and acrylonitrile, 200 ug/L;
  - b. for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol, 500 ug/L;
  - c. for antimony, 1mg/L;
  - d. for any other toxic pollutant listed in Minnesota Rules, pt. 7001.1060, subp. 4 to 10, 100 ug/L; or
  - e. five times the maximum concentration value identified and reported for that pollutant in the permit application. (Minnesota Rules, pt. 7001.1090, subp. 2.A)
- 2.2 The Permittee shall notify the MPCA immediately if the Permittee has begun or expects to begin to use or manufacture as an intermediate or final by-product a toxic pollutant that was not reported in the permit application under Minnesota Rules, pt. 7001.1050, subp. 2.J. (Minnesota Rules, pt. 7001.1090, subp. 2.B)

## **Chapter 3. Industrial Process Wastewater**

### **3. Hydrotest Discharges**

- 3.1 The Permittee shall notify the MPCA prior to discharging tank hydrostatic test waters to the river. The Permittee shall provide information necessary to evaluate the potential impact of this discharge and to ensure compliance with this permit. This information shall include:
- a. the proposed discharge dates;
  - b. the name and location of receiving waters, including city or township, county, and township/range location;
  - c. an evaluation of the impact of the discharge on the receiving waters in relation to the water quality standards;
  - d. a map identifying discharge location(s) and monitoring point(s);
  - e. the estimated average and maximum discharge rates;
  - f. the estimated total flow volume of discharge;
  - g. the water supply for the test water, with a copy of the appropriate Minnesota Department of Natural Resources (DNR) water appropriation permit;
  - h. water quality data for the water supply;
  - i. proposed treatment method(s) before discharge; and
  - j. methods to be used to prevent scouring and erosion due to the discharge.
- 3.2 In lieu of the notification and information specified in section 3.1 above, the Permittee may report hydrostatic test water discharges to the facility wastewater treatment system in the monthly discharge monitoring report (DMR).
- 3.3 This permit does not authorize the construction or installation of pipeline facilities.

### **4. Polychlorinated Biphenyls (PCBs)**

- 4.1 PCBs, including but not limited to those used in electrical transformers and capacitors, shall not be discharged or released to the environment.

### **5. Application for Permit Reissuance**

- 5.1 The permit application shall include analytical data as part of the application for reissuance of this permit. These analyses shall be done on individual samples taken during the twelve-month period before the reissuance application is submitted.

## **Chapter 3. Industrial Process Wastewater**

### **5. Application for Permit Reissuance**

5.2 The permit application shall include analytical data for at least the following parameters at monitoring station SD001:

- a. biochemical oxygen demand, chemical oxygen demand, total organic carbon, gasoline range organics, diesel range organics, fecal coliform, ammonia, temperature;
- b. fluoride, nitrate-nitrite (as nitrogen), total organic nitrogen, oil and grease, total phosphorus, chloride, sulfate, sulfide (as sulfur), surfactants, bicarbonates, alkalinity, total salinity, total dissolved solids, specific conductance;
- c. aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, molybdenum, nickel, potassium, selenium, silver, sodium, thallium, tin, titanium, vanadium, zinc (all in total form) according to 40 CFR Part 136.3;
- d. total mercury using EPA Method 1631;
- e. gross alpha particles, radium-226, radium-228, radon-222, uranium;
- f. PCB-1016, PCB-1221, PCB-1232, PCB-1242, PCB-1248, PCB-1254, PCB-1260; and
- g. a scan of constituents using EPA Methods 624 and 625, in 40 CFR Part 136.

The Permittee shall identify, in addition to those pollutants noted in Methods 624 and 625 (Appendix D, Table II), the concentrations of at least ten of the most abundant constituents of the acid and base/neutral organic fractions shown to be present by peaks on the total ion plots (reconstructed gas chromatograms) within ten percent of the nearest internal standard. Identification shall be through the use of U.S. EPA/NIH computerized library of mass spectra, with visual confirmation and potential quantification. Permittee may propose alternative testing methods for review and approval by the MPCA.

### **6. Mobile and Rail Equipment Service Areas**

- 6.1 Locomotive traction sand, degreasing wastes, motor oil, oil filters, oil sorbent pads and booms, transmission fluids, power steering fluids, brake fluids, coolant/antifreeze, radiator flush wastewater and spent solvents shall be collected and disposed of in accordance with applicable solids and hazardous waste management rules. These materials shall not be discharged to surface or ground waters of the state.
- 6.2 The steam-cleaning of mobile equipment and rail equipment, except for limited outdoor cleaning of large drills and shovels, shall be conducted in wash bays that drain to wastewater treatment systems that include the removal of suspended solids and flammable liquids. The only washing of mobile equipment done in outside areas shall be to remove mud and dirt that has accumulated during outside work.
- 6.3 Mobile and rail equipment washing shall not use solvent-based cleaners such as those available for brake cleaning and degreasing, unless the cleaning fluids are completely contained and not allowed to flow to surface or ground waters of the state. Soaps and detergents used in washing shall be biodegradable.
- 6.4 Mobile and rail equipment maintenance and repairs shall not be conducted in wash bays.
- 6.5 Hazardous materials shall not be stored or handled in wash bays.
- 6.6 Wastewater containment systems, including pipes shall be inspected regularly. Leaks that are detected shall be repaired immediately.
- 6.7 If the Permittee discovers that recoverable amounts of petroleum products have entered wastewater containment systems, they shall be recovered immediately, and reported to the MPCA.

## **Chapter 3. Industrial Process Wastewater**

### **6. Mobile and Rail Equipment Service Areas**

6.8 Spill cleanup procedures shall be maintained for reference in the Facility Response Plan.

## **Chapter 4. Industrial Pond System**

### **1. Authorization**

- 1.1 The term "pond" in this chapter refers to the aerated lagoon currently operated at the Facility.
- 1.2 This chapter authorizes the Permittee to manage wastewater in the lagoon, as described in the 'Facility Description' section of this Permit. This activity is limited by the 'Limits and Monitoring' section of this Permit, as well as the other terms and conditions of this Permit. Once the new wastewater treatment plant becomes operational, no untreated wastewater shall be discharged to the lagoon and the lagoon will function as a utility pond used for stormwater management, hydrotest water discharges, and emergency fire fighting water requirements.
- 1.3 The requirements of this chapter apply to all components of the permitted pond system, including all directly associated conveyances and/or appurtenances.
- 1.4 This Permit does not authorize a release or discharge of hazardous substances or pollutants or contaminants into groundwater. Nothing in this Permit prevents the MPCA from exercising its authority to require investigation and remediation of releases or discharges and from imposing additional requirements at the Facility that go beyond those contained in the NPDES/SDS permit, including requirements related to the pond.

### **2. Operation and Maintenance**

#### **Pond Performance Evaluation**

- 2.1 Submit to the MPCA for review and approval a Pond Performance Evaluation Plan for conducting a water balance test of the pond in accordance with sub-section 2.2-2.9. The Plan shall be submitted to the MPCA within 180 days after permit issuance.
- 2.2 The Minnesota water balance test has been used and evaluated primarily as a means to confirm the performance of newly constructed pond seals that are installed with adequate inspection. When it is used for existing ponds, additional measures need to be taken to ensure accuracy of the results. Atypical circumstances that are known to exist at the Facility lagoon, which will need to be addressed by modified or augmented testing procedures, include the following:
  - 1.The presence of a thick sludge/sediment layer;
  - 2.Unknown sidewall and bottom construction;
  - 3.Greater than normal water depth;
  - 4.Active inflows to the pond;
  - 5.Larger than average dike surfaces on the east side, serving as runoff catchment;
  - 6.Potential surface runoff catchment beyond the inner dike slopes;
  - 7.A water table above the bottom of the pond to the west;
  - 8.A water table/potentiometric surface above the lagoon surface to the east;
  - 9.An active upgradient and cross-gradient remediation system utilizing pumping wells and French drains;

If the MPCA determines that the uncertainty or technical challenges posed by these circumstances cannot be addressed by additional or modified test procedures that will provide a reliable and valid water balance test result, then a valid test cannot be conducted and the lagoon will effectively fail to meet the requirement of leaking less than 3500 gallons per acre per day. This type of failure will require the Permittee to follow the conditions of sections 2.8 e. and 2.9 of this chapter. General methodology for the Water Balance Test are described in the MPCA report "Prefill and Water Balance Criteria" at <http://www.pca.state.mn.us/index.php/view-document.html?gid=15336>.

## **Chapter 4. Industrial Pond System**

### **2. Operation and Maintenance**

2.3 Additional procedures that are required to address the circumstances described above and to ensure that test results are valid include the following sub-sections 2.4, 2.5, and 2.6.

#### **2.4 Pond Testing Procedural Needs:**

a. Anchor the barrels on benches constructed on the dike side slope (addresses circumstances 1, 2, and 3).

#### **2.5 Influent Considerations**

a. Isolate the lagoon from inflows during the testing period or, if unable to do this, accurately monitoring all inflows and extending the test period to a minimum of 90 days (circumstance 4).

b. Accurately measure and evaluate the eastern dike slope to estimate a suitable runoff coefficient based on observed soils, slope and vegetative cover. Validate the coefficient with data collected during or prior to the test (circumstance 5).

c. Evaluate the possibility of runoff from precipitation falling on any area other than the dike slopes from entering the lagoon and, if the potential exists, initiate engineering measures adequate to prevent this from occurring (circumstance 6).

#### **2.6 Surface and Groundwater Conditions:**

a. Ensure that potential seepage from the pond is not limited by high water table conditions on the outflow side by performing the test when the Mississippi River is below its median stage (circumstance 7).

b. Perform the test when the pond surface is equal to or above the water table/potentiometric surface in the bedrock comprising the east sidewall of the lagoon as observed in a minimum of two bedrock wells that have been determined by pre-test analysis to adequately represent the portion of the aquifer present in the bedrock that is most likely to be in communication with the lagoon. Additional wells may need to be installed if existing wells do not appear to be uniformly representative of the aquifer in this area based on a comparison of a representative period of observed water levels. The hydraulic head in the wells should be monitored by pressure transducers logging at a 30 minute or less interval for the duration of the test (circumstance 8).

c. Perform the test when the vicinity product recovery wells and French drains are operating according to design (circumstance 9).

2.7 Follow-up Testing: Because it is not known the degree to which the sediment/sludge layer may be serving to limit seepage from the pond, and given that this layer can vary over time as a result of various processes, the test needs to be periodically repeated to confirm a passing result. There must be at least one test per five year permit cycle. Additional events that may require retesting include any event that may significantly change the sediment/sludge layer, such as a river flooding event or rapid changes in pond level due to its use as a firefighting water source.

## **Chapter 4. Industrial Pond System**

### **2. Operation and Maintenance**

- 2.8 The Pond Performance Evaluation Final Report shall include at least the following elements for the pond at the Facility:
- a. Pond performance data, calculations and graphs for the pond at the Facility. Pond performance data includes, but is not limited to, water balance data, influent and effluent flow data for the pond, capacity/volume use comparisons, and other data collected as part of the pond evaluation.
  - b. A determination of whether the seepage requirements specified by part 2.10 of this chapter, relative to liner integrity of the pond at the Facility, are being met;
  - c. Completed "Stabilization Pond Information Sheet" form, which is included in the appendices section of this Permit, for the pond at the Facility;
  - d. A certification from a registered professional engineer with expertise in wastewater structures that the respective impoundment at the Facility meets the technical criteria specified by parts 2.10, 2.11 and 2.12 of this chapter; or,
  - e. If the professional engineer can not certify that the pond meets the required technical criteria, a Pond Restoration Plan shall be submitted for MPCA review and approval, to be completed by a registered professional engineer with expertise in wastewater structures. The Pond Restoration Plan shall include, at minimum, a proposal of corrective actions for the restoration of the pond at the Facility to meet the technical criteria in parts 2.10, 2.11 and/or 2.12 of this chapter, and an implementation schedule for the proposed actions.
- 2.9 Submit a Pond Performance Evaluation Final Report within three and one half years (1,278 days) after Permit issuance. If the Pond does not meet the minimal seepage requirements or a valid test could not be or was not performed, then a Pond Restoration Plan shall also be submitted with the final report. The restoration plan shall also include the proposed remedial design plans and specifications.

#### **Maintenance of Wastewater Ponds**

- 2.10 Liner Performance. Wastewater ponds at the facility shall maintain liner systems that restrict infiltration losses to less than 500 gallons per acre per day if the pond was constructed after May 16, 1975 or less than 3,500 gallons per acre per day if the pond was constructed before May 16, 1975.
- 2.11 Locational Standards. All of the following locational standards apply to the pond located at the Facility:
- a. The impoundment may not be located within a shoreland or wild and scenic river land use district governed by Minn. R. chapters 6105 and 6120.
  - b. The impoundment may not be located within a wetland.
  - c. The impoundment may not be located within a location where emissions of air pollutants would violate the ambient air quality standards in Minn. R. chapters 7005, 7007, 7009, 7011, 7017, 7019, and 7028 and Minn. R. parts 7023.0100 to 7023.0120.
  - d. The impoundment may not be located in the designated Karst Region in the Southeastern portion of Minnesota that was subject to the 1993 Administrative Order that required the preparation of a contingency plan.
  - e. The impoundment should not be located in an area which is unsuitable because of topography, geology, hydrology, or soils.



## **Chapter 4. Industrial Pond System**

### **2. Operation and Maintenance**

2.12 Operating Depth. All of the following apply to the pond at the Facility:

- a. Except for impoundments lined with synthetic material, such as HDPE or PVC, impoundments that do not discharge continuously shall maintain a minimum depth of 2 feet at all times, except for maintenance.
  - b. At least 3 feet freeboard on all impoundments and wastewater solids containment dams at the Facility shall be maintained at all times.
  - c. Based on specific Facility conditions and upon demonstration of an acceptable alternative, an alternate performance standard may be approved by the MPCA. Specific written authorization by the MPCA shall be obtained prior to implementing an alternately approved performance standard in lieu of item a. and/or b. of this part.
- 2.13 The pond embankments shall be adequately protected from erosion. Riprap covers shall meet the MPCA's guidance "Riprap Criteria for Stabilization Ponds" (5/91) and shall be maintained on any earthen wastewater impoundment dikes from one foot above the high water line to the toe of the dike. Where vegetative covers are provided, the Permittee shall maintain a vegetative cover of shallow-rooted, perennial, low-growing grasses that withstand erosion and inundation and that can be mowed. Other alternative types of covers shall be documented in the associated operation and maintenance program, and inspected with the rest of the Facility each permit cycle.
- 2.14 Plants with long root structures, such as alfalfa, reed canary, willows, poplars, cottonwoods, shrubs, and cattails shall not be allowed to grow in the pond or on the dikes, regardless of water depth in the pond. Such harmful vegetative growth shall be controlled and such plants removed from the pond and pond structure.
- 2.15 The Permittee shall use approved methods to prevent muskrats and other burrowing animals from tunneling and causing damage to the pond liner or dikes.
- 2.16 The Permittee shall maintain a perimeter fence around the refinery. The wastewater treatment system and pond are located within the refinery. Appropriate signs should be provided along all fences to designate the nature of the Facility and advise against trespassing. At least one sign shall be provided on each side of the refinery.
- 2.17 In addition to the requirements of this Permit, the Permittee shall operate and maintain the pond system in general accordance with MPCA's "Stabilization Pond Systems, Operations, Maintenance, Management" (2013).

#### **Solids Removal**

- 2.18 Prior to the excavation or removal of any solids from the pond at the Facility, the Permittee shall notify the MPCA of its intent. The notification shall include a detailed plan of the solids removal and disposal, as well as the lagoon liner protective, remedial, and tightness testing follow-up measures. This proposal shall be submitted to the MPCA for review and approval 90 days prior to anticipated initiation of the solid removal process.
- 2.19 A water balance evaluation, to be conducted after the solids removal, shall be completed on the pond in accordance with the conditions of the set forth in the "Pond Performance Evaluation" section of this chapter.
- 2.20 Ground water quality monitoring results shall be evaluated before and after the excavation or removal of solids to assess the potential impacts of the pond on ground water. Any significant changes shall be reported to the MPCA on the next scheduled Discharge Monitoring Report.

#### **Inspection of the Pond**

- 2.21 The Permittee shall inspect the pond system weekly, and shall take measurements of pond water depth, estimate the coverage of aquatic plants, floating mats and ice cover on the surface of the ponds, and note odors, the condition of the dikes and the presence of muskrats. The Permittee shall maintain records of these weekly inspections for the last five (5) years, and submit the results on the Discharge Monitoring Report (DMR) supplemental form.

## **Chapter 4. Industrial Pond System**

### **2. Operation and Maintenance**

2.22 The Permittee shall maintain daily precipitation records.

### **3. Application for Permit Reissuance**

- 3.1 By the end of each calendar five years following permit issuance, the pond, pond dike related conveyances, and appurtenances of the pond system at the Facility shall be inspected and certified for structural integrity, and for compliance with performance standards.
- 3.2 The inspection and certification shall be completed by a registered professional engineer with expertise in pond structures.
- 3.3 An inspection report shall be prepared by the professional engineer and submitted with the application for permit reissuance and/or every five years, whichever comes first.
- 3.4 If repairs are necessary as a result of the professional engineer's inspection, a detailed proposal for restoration shall be submitted to the Agency for review within 180 days of discovery, and at least 60 days prior to initiation of restoration work.

### **4. Discharge Requirements**

4.1 Direct discharges of waters from the pond system to a water of the state is not permitted in this Permit.

## **Chapter 5. Dredged Material Management**

### **1. Authorization**

- 1.1 This permit authorizes the Permittee to store, dispose, and/or reuse dredged material from the barge dock area of the Mississippi River in accordance with the provisions of this permit.
- 1.2 This permit authorizes the discharge of stormwater originating from the dredge project site as delineated and described by the requirements of part 3.10 of this chapter, as well as incidental discharges associated with rehandling, off-loading and/or transportation activities when managed in accordance with parts 2.1 through 2.5 of this chapter.
- 1.3 Except as provided in this permit, this permit does not authorize or otherwise regulate dredging activity. However, dredging activity is subject to the water quality standards specified in Minnesota Rules chs. 7050 and 7060.

Initiation of dredge activities shall not commence until the Permittee has obtained all federal, state and/or local approvals that may be required for a particular project, including but not limited to state permits regulating activities in the bed of public waters as defined in Minn. Stat. sec. 105 from the Minnesota Department of Natural Resources (DNR), federal permits for dredged or fill material from the US Army Corps of Engineers (USCOE), and local permits from the appropriate Soil and Water Conservation District, county or local unit of government (LUG).

## **Chapter 5. Dredged Material Management**

### **1. Authorization**

1.4 The following activities are not authorized by this permit:

- a. The discharge of wastewater or stormwater into waters of the state, except as provided by part 1.2 of this permit.
- b. The discharge of dredged material to surface water from the storage, disposal and/or reuse facility, including disposal methods such as unconfined disposal, beach nourishment, disposal in wetlands, other in-water disposal, or hydraulic dredging with return flow (non-confined hydraulic dredging).
- c. Permit coverage at sites for which Environmental Assessment Worksheets or Environmental Impact Statements are required, in accordance with Minn. R. ch. 4410, until that environmental review is completed.
- d. The discharge of sewage, wash water, scrubber water, spills, oil, hazardous substances, or equipment/vehicle cleaning and maintenance wastewaters to ditches, wetlands nor other surface waters of the state.
- e. The routing of pollutants from the dredging activity or the dredged material storage, disposal, and/or reuse facility to a municipal wastewater treatment system in any manner unless authorized by the pretreatment standards of the MPCA and the municipal authority.
- f. The transport of pollutants to a municipal wastewater treatment system that will interfere with the operation of the treatment system or cause pass-through violations of effluent limits or water quality standards.

1.5 Compliance with the terms and conditions of this permit releases the Permittee from the requirement to obtain a separate permit for industrial activities at the dredge storage, disposal and/or reuse site that would otherwise require the Permittee to obtain an industrial stormwater permit in accordance with the Clean Water Act and Agency rules, except where the use or reuse of dredged material is occurring at a location separate from areas covered by this permit. The requirement to obtain a construction stormwater permit for land disturbing activities, where otherwise required, is not waived by this permit.

### **2. Rehandling, Off-Loading and Transportation of Dredged Material**

- 2.1 Dredged materials shall be managed in a manner so as to minimize the amount of material returned by spillage, erosion or other discharge to waters of the state during rehandling, off-loading and/or transportation activities.
- 2.2 Areas for the rehandling and/or off-loading of dredged material shall be sloped away from surface water, or otherwise designed to prevent runoff from the area. In cases where the topography of the project does not physically allow for a slope away from surface water, the Permittee shall otherwise manage the area to minimize the amount of material returned by spillage, erosion or other discharge to waters of the state.
- 2.3 Dredged material hauled on federal, state, or local highways, roads, or streets must be hauled in such a way as to prevent dredged material from leaking, spilling, or otherwise being deposited in the right-of-way. Dredged material deposited on a public roadway must be immediately removed and properly disposed.
- 2.4 The Permittee shall minimize vehicle tracking of soil or dredged material off-site at locations where vehicles exit the dredging, storage, disposal and/or reuse facility onto impervious surfaces by BMPs such as stone pads, concrete or steel wash racks, or equivalent systems.
- 2.5 Tracked soil and/or dredged material shall be removed from impervious surfaces that do not drain back to the dredged material storage, disposal and/or reuse facility within 24 hours of discovery, and placed in the storage, disposal and/or reuse facility site.

### **3. Storage, Disposal and/or Reuse of Dredged Material**

- 3.1 Authorization. Prior to the use of a site for the storage, disposal, and/or reuse of dredged material, the Permittee shall obtain written MPCA approval for such use.

## **Chapter 5. Dredged Material Management**

### **3. Storage, Disposal and/or Reuse of Dredged Material**

- 3.2 General. Any site used for the storage, disposal and/or reuse of a dredged material shall be operated and maintained by the Permittee to control runoff, including stormwater, from the facility to prevent the exceedance of water quality standards specified in Minnesota Rules, chs. 7053 and 7060.
- 3.3 The Permittee shall limit and control the use of materials at the facility that may cause exceedances of ground water standards specified in Minnesota Rules, ch. 7060. These materials include, but are not limited to, detergents and cleaning agents, solvents, chemical dust suppressants, lubricants, fuels, drilling fluids, oils, fertilizers, explosives and blasting agents.
- 3.4 The Permittee may dispose of dredged material at a permitted solid waste landfill, through on-site disposal, or through reuse for a beneficial purpose, as follows:
- a. Temporary storage and/or treatment of dredged material at the dredge project site. Temporary storage of dredged material is subject to the requirements of part 3.5 of this chapter.
  - b. Disposal of dredged material at the dredge project site. Disposal of dredged material is subject to parts 3.6 through 3.41 of this chapter.
  - c. Reuse of dredged material for beneficial purposes. Reuse of dredged material is subject to parts 3.42 through 3.45 of this chapter.

#### **A. Temporary Storage and/or Treatment of Dredged Material**

##### **3.5**

All of the following requirements apply to the temporary storage and/or treatment of dredged material:

- a. Temporary storage shall not exceed 1 year. Storage or accumulation of dredged material for more than 1 year constitutes disposal, and is subject to the disposal facility requirements of parts 3.6 through 3.41 of this chapter.
- b. The quantity of dredged material to be stored at the site shall not exceed the quantity of material authorized for disposal at the site, as specified by part 3.12 of this chapter.
- c. Dredged materials shall be managed in a manner so as to minimize the amount of material returned by spillage, erosion or other discharge to waters of the state. Best management practices for the management of dredged materials are outlined in the MPCA fact sheet, "Best Management Practices for the Management of Dredged Material", (wq-qen2-01, 4/07), which is included in the Appendices section of this permit.
- d. If dikes, berms or silt fences have been constructed to contain temporary stockpiles of dredged material, they shall not be removed until all material has been removed from the stockpile.

#### **B. Disposal of Dredged Material**

- 3.6 Except as provided in this permit, disposal of dredged material is not authorized by this permit.
- 3.7 Notification. Notification of a new or existing dredge disposal facility shall be submitted on a form provided by the MPCA, or another MPCA approved form, for MPCA review and approval with permit application.
- 3.8 Disposal facilities shall be constructed/operated in accordance with local requirements, including the requirement to obtain a permit, license, or other governmental approval to initiate construction.

## **Chapter 5. Dredged Material Management**

### **3. Storage, Disposal and/or Reuse of Dredged Material**

3.9 Initial Site Plan. An initial site plan shall be prepared and submitted for MPCA review and approval with permit application. The initial site plan shall consist of volume calculations for the final permitted capacity and a map of the facility. The map of the facility shall include the permitted boundaries, dimensions, site contours (at contour intervals of two feet or less), soil boring locations with surface elevations and present and planned pertinent features, including but not limited to roads, screening, buffer zone, fencing, gate, shelter and equipment buildings, and surface water diversion and drainage. The initial site plan must be signed by a land surveyor registered in Minnesota or a professional engineer registered in Minnesota.

3.10 Delineation and Identification of Permitted Waste Boundary. The perimeter or outer limit of a dredged material disposal facility shall be indicated by permanent posts or signage. In addition, a permanent sign, identifying the operation and showing the permit number of the site, shall be posted at the dredged material disposal facility.

#### **Site Selection and Use**

3.11 Locational Prohibitions. All of the following locational standards apply to any facility for the disposal of dredged material:

- a. The disposal facility must be located entirely above the high water table.
- b. The disposal facility must not be located within a shoreland or wild and scenic river land use district governed by Minn. R. chapters 6105 and 6120.
- c. The disposal facility must not be located within a wetland, unless the Permittee has obtained all federal, state and/or local approvals that may be required for a particular project.
- d. The disposal facility must not be located in the designated Karst Region in the Southeastern portion of Minnesota that was subject to the 1993 Administrative Order that required the preparation of a contingency plan.
- e. The disposal area shall not be located in an area which is unsuitable because of topography, geology, hydrology, or soils.

3.12 Separation Distances. A minimum separation distance of 50 feet must be maintained between the boundaries of the disposal facility and the site property line.

#### **Design Requirements**

3.13 Design Capacity. The maximum quantity of dredged material authorized for disposal at the dredged material disposal facility (final permitted capacity) is limited to the cubic yards approved by the MPCA in accordance with Section 3.9.

## Chapter 5. Dredged Material Management

### 3. Storage, Disposal and/or Reuse of Dredged Material

3.14 The following design standards apply to a facility used for the disposal of dredged materials:

- a. An earthen containment dike, or other MPCA approved embankment and/or other sediment control measure(s), shall be established around the perimeter of the dredged material disposal facility (permitted waste boundary).
- b. Site preparation shall allow for orderly development of the site. Initial site preparations shall include clearing and grubbing, topsoil stripping and stockpiling, fill excavation, if appropriate, drainage control structures, and other design features necessary to construct and operate the facility.
- c. The site shall be developed in phases in accordance with a 'Operational Plan', as specified by part 3.16 of this chapter, to achieve final fill elevations as rapidly as possible. The design of each phase shall take into account weather conditions, site drainage, and the waste flow pattern into the site.
- d. Surface water runoff shall be diverted around dredged materials disposal facilities to prevent erosion, and protect the structural integrity of exterior embankments from failure.
- e. Slopes and drainageways shall be designed to prevent erosion. Slopes longer than 200 feet shall be interrupted with drainageways.
- f. Final slopes for the fill area shall be a minimum two percent and a maximum 20 percent, and shall be consistent with the planned ultimate use for the site.
- g. Final cover shall consist of at least 18 inches of soil with the top 12 inches capable of sustaining vegetative growth.
- h. For a system that will impound water (e.g. hydraulic dredging) with a constructed dike over 6 feet in height, or that impound more than 15 acre-feet of water, the system is subject to Minn. R. parts 6115.0300 through 6115.0520 [state Dam Safety Program]. Contact state Dam Safety Program staff at (651) 296-0521 for more information.

3.15 Site Stabilization. The Permittee shall stabilize the dredged material disposal facility before any disposal in the facility is allowed, as follows:

- a. The exterior slope of all permanent dikes or berms shall be no steeper than 3 to 1 (horizontal to vertical). The exterior slopes of all permanent dikes or berms must be seeded and a soil fixative (e.g. mulch, blanket) applied within 72 hours of the completion of any grading work on the slopes.
- b. If grading work is completed too late in the growing season to seed or plant the desired species, then the Permittee must propagate an annual cover crop that can be dormant seeded or planted and must apply a soil fixative to the site. At the very minimum, the Permittee must apply a soil fixative to the exterior slopes of all permanent dikes or berms prior to the first snowfall.
- c. Silt fences, if used, must be properly installed. The silt fences shall be tall enough and installed at a sufficient distance from the base of the permanent dikes/berms or temporary stockpiles to create a reasonable secondary containment area.

3.16 Operational Plan. An Operational Plan of the site and immediately adjacent area shall be developed and implemented, and shall show progressive development of trench and/or area fills and any phase construction. The scale of the development plan shall not be greater than 200 feet per inch.

## **Chapter 5. Dredged Material Management**

### **3. Storage, Disposal and/or Reuse of Dredged Material**

- 3.17 Facilities for the disposal of dredged material shall be designed by a professional engineer registered in the state of Minnesota, and in accordance with the criteria in parts 3.12 and 3.13 of this chapter. The Permittee shall construct the facility in accordance with these design plans and specifications under the direct supervision of a professional engineer registered in the state of Minnesota.
- 3.18 Certification Required. Prior to use of a facility for the disposal of dredged material under this part, the Permittee shall obtain and submit written certification from an engineer licensed in Minnesota stating that the disposal facility meets the requirements of parts 3.12 and 3.13 of this chapter, and has been constructed in accordance with the design plans and specifications.

#### **Site Management, Limitations, and Restrictions**

- 3.19 New or Expanded Facilities. All of the following requirements apply to the construction of new or expanded facilities used for the disposal of dredged material:
- a. The Permittee shall plan for and implement construction practices that minimize erosion and maintain dike integrity.
  - b. Erosion control measures shall be established on all downgradient perimeters prior to the initiation of any upgradient land-disturbing construction activities.
  - c. Surface runoff must be directed around and away from the storage and/or disposal facility site, until the site is stabilized, usually by assuring that vegetative cover is well-established.
  - d. Sediment control practices shall be designed and implemented to minimize sediment from entering surface waters. The timing of the installation of sediment control practices may be adjusted to accommodate short-term activities such as equipment access. Any short-term activity must be completed as quickly as possible and the sediment control practices must be installed immediately after the activity is completed. However, sediment control practices must be installed before the next precipitation event even if the activity is not complete.
  - e. All erosion and sediment control measures shall remain in place until final stabilization has been established. Permanent cover or final stabilization methods are used to prevent erosion, such as the placement of rip rap, sodding, or permanent seeding or planting. Permanent seeding and planting must have a uniform perennial vegetation cover of at least 70 percent density to constitute final stabilization.
  - f. The facility shall be stabilized, as specified by part 3.14 of this chapter, before any disposal in the facility is allowed.

## **Chapter 5. Dredged Material Management**

### **3. Storage, Disposal and/or Reuse of Dredged Material**

3.20 Management of Disposal Facilities. The following standards apply to a facility used for the disposal of dredged material:

- a. Each fill phase shall be outlined with grade stakes, and staked for proper grading and filling.
- b. All trenches or fill areas shall be staked with permanent markers.
- c. A permanent benchmark shall be installed on-site and show its location on the facility as-built plan.
- d. Run-on and run-off of stormwater shall be controlled. The owner or operator must implement management practices designed to control run-on and run-off of stormwater from the disposal facility.
- e. Vegetative cover shall be established within 120 days of reaching the final permitted capacity of the dredged material disposal facility, or within 120 days of the inactivation or completion of a phase of the facility thereof.
- f. If the disposal facility contains any particulate matter that may be subject to wind dispersion, the owner or operator shall cover or otherwise manage the dredged material to control wind dispersion.
- g. Nuisance conditions resulting from the disposal of dredged material shall be controlled and managed by the facility owner or operator.
- h. Cover slopes shall be surveyed and staked during placement.
- i. Final closure of a dredged material disposal facility shall be completed in accordance with parts 3.30 through 3.40 of this chapter, and requires MPCA approval.

#### **Inspection and Maintenance**

- 3.21 The Permittee shall operate and maintain the integrity of the dike system, embankment and/or other erosion control equipment in compliance with the design requirements of parts 3.12 and 3.13 of this chapter at all times.
- 3.22 Periodic Site Inspections. The Permittee shall inspect the disposal facility to ensure integrity of the erosion control measures, system stability and dredged material containment. At a minimum, the facility shall be inspected:
  - a. prior to the initial placement of any dredged material in the facility; and,
  - b. within 24 hours of each significant storm event and/or the subsidence of flood events; or,
  - c. at least once per month if a and/or b, above, are not occurring.
- 3.23 Recordkeeping. The Permittee shall record the date of each inspection, any problem identified with the facility, and the action(s) taken to correct any identified problem. The Permittee shall keep these inspection records on site and available to MPCA staff upon request.
- 3.24 Nonfunctioning erosion and sediment control measures shall be repaired, replaced or supplemented with functioning erosion and/or sediment control measures within three days of discovery.
- 3.25 Dikes and berms constructed to contain hydraulically dredged material and the attendant liquid must be maintained free of all types of animal burrows. Animal burrows should be backfilled with compacted material within three days of discovery.



## **Chapter 5. Dredged Material Management**

### **3. Storage, Disposal and/or Reuse of Dredged Material**

- 3.26 Where dredging and disposal have been suspended due to frozen ground conditions, the inspections and maintenance shall begin as soon as weather conditions warrant, or prior to resuming dredged material placement in the disposal facility, whichever occurs first.
- 3.27 The Permittee shall continue inspections required by this part until final closure of the site has been completed as specified in parts 3.30 through 3.40 of this chapter.

#### **Sediment Removal and Disposal**

- 3.28 Dredged material shall be removed from disposal facilities in a manner so as to not damage the integrity and effectiveness of the containment structure or area.
- 3.29 Dredged material removed from a storage, disposal, and/or reuse facility shall be managed in accordance with part 3.4 of this chapter.
- 3.30 Recordkeeping. The Permittee shall record the dates, the volume of dredged material removed from the disposal facility, and the method and location of the disposition (disposal or reuse) of such materials. This information shall be submitted with the annual 'Dredged Material Report', as specified in the 'Annual Report' part of this chapter.

#### **Closure and Post-Closure Requirements**

- 3.31 The Permittee must cease to dispose of dredged materials and immediately close the dredged material disposal facility when:
- a. the Permittee declares the dredged material disposal facility closed;
  - b. all fill areas reach final permitted capacity, as specified by part 3.12 of this permit;
  - c. an agency permit held by the facility expires, and renewal of the permit is not applied for, or is applied for and denied;
  - d. an agency permit for the facility is revoked; and/or,
  - e. an agency order to cease operations is issued.
- 3.32 Closure Plan. The Permittee shall prepare and submit a 'Closure Plan' for the final closure of a dredged material disposal facility for MPCA review and approval with permit application.
- 3.33 If repairs are necessary as a result of the professional engineer's inspection, a detailed proposal for restoration shall be submitted to the Agency for review within 180 days of discovery, and at least 60 days prior to initiation of restoration work.
- 3.34 A copy of the approved 'Closure Plan' and all revisions to the plan shall be kept at the facility until closure is completed and certified in accordance with part 3.39 of this chapter. At the time of closure, the Agency will issue a closure document in accordance with Minn. R. part 7001.3055.
- 3.35 Amendment of Plan. The Permittee may amend the 'Closure Plan' (plan) any time during the life of the facility. The Permittee shall amend the plan whenever changes in the operating plan or facility design affect the closure procedures needed, and whenever the expected year of closure changes. Required amendments shall be completed within 60 days of any change or event that affects the closure plan.
- 3.36 Notification of Final Facility Closure. The Permittee shall notify the MPCA at least 90 days before final facility closure activities are to begin, except if the permit for the facility has been revoked.

## **Chapter 5. Dredged Material Management**

### **3. Storage, Disposal and/or Reuse of Dredged Material**

- 3.37 Closure Performance Standard. The Permittee must close the dredged material disposal facility in a manner that eliminates, minimizes, or controls the escape of pollutants to ground water or surface waters, to soils, or to the atmosphere during the postclosure period.
- 3.38 Completion of Closure Activities. Within 30 days after receiving the last shipment of dredged material for disposal, the Permittee must begin the final closure activities outlined in the approved 'Closure Plan' for the dredged material disposal facility. Closure activities must be completed according to the approved 'Closure Plan'. The MPCA may approve a longer period if the owner or operator demonstrates that the closure activities will take longer due to adverse weather or other factors not in the control of the Permittee.
- 3.39 Closure Procedures. If one or more of the conditions of part 3.30 of this chapter exists, the Permittee shall:
- a. Complete the appropriate activities outlined in the approved 'Closure Plan'.
  - b. Complete final closure activities consisting of submitting to the county recorder and the MPCA a detailed description of the waste types accepted at the facility and what the facility was used for, together with a survey plat of the site. The plat must be prepared and certified by a land surveyor registered in Minnesota. The landowner must record a notation on the deed to the property or on some other instrument normally examined during a title search, that will in perpetuity notify any potential purchaser of the property of any special conditions or limitations for use of the site, as set out in the 'Closure Plan' and closure document.
- 3.40 Certification of Closure. When final facility closure is completed, the Permittee shall submit to the commissioner certification by the Permittee and an engineer registered in Minnesota that the facility has been closed in accordance with part 3.38 of this chapter.

The certification shall contain the following elements:

- a. a completed and signed 'Site Closure Record';
  - b. documentation of closure, such as pictures, showing the construction techniques used during closure; and,
  - c. a copy of the notation carrying the recorder's seal which has been filed with the county recorder.
- 3.41 Post-Closure Care. After final closure, the Permittee shall comply with the following requirements:
- a. restrict access to the facility by use of gates, fencing, or other means to prevent further disposal at the site, unless the site's final use allows access;
  - b. maintain the integrity and effectiveness of the final cover, including making repairs to the final cover system as necessary to correct the effects of settling, subsidence, gas and leachate migration, erosion, root penetration, burrowing animals, or other events;
  - c. prevent run-on and run-off from eroding or otherwise damaging the final cover;
  - d. protect and maintain surveyed benchmarks used in complying with part 3.19 of this chapter; and,
  - e. complete corrective action necessary to meet the requirements of part 3.19 of this chapter within 30 days of discovery.

### **C. Beneficial Use or Re-Use of Dredged Material**

- 3.42 Prior to the use or reuse of a dredged material, the Permittee shall determine the appropriate "suitable reuse category" of the dredged material to be used or reused, as described below.

## **Chapter 5. Dredged Material Management**

### **3. Storage, Disposal and/or Reuse of Dredged Material**

3.43 Suitable Reuse Categories. The suitable reuse category of a dredged material is based on the analyzed characteristics of the dredged material and appropriately applied Soil Reference Values (SRVs), which are listed in Table 1 in the Appendices section of this permit.

For the purposes of this permit, dredged material intended for the beneficial use or reuse is categorized into three tiers: Level 1, Level 2, and Level 3.

a. Level 1 material is authorized to be used or reused at/on sites with a residential or recreational property use category. Level 1 material is characterized by:

- i. a contaminant level that is at or below all respective analyte concentrations listed in the Residential SRV column for any contaminant that can be reasonably expected to be present in the dredged material; or,
- ii. having more than 93% sand, as demonstrated by the grain size analysis described by part 4.5 of this chapter.

b. Level 2 material is authorized to be used or reused on/at sites with an industrial use category. Level 2 material is characterized by a contaminant level that is at or below all respective analyte concentrations listed in the Industrial SRV column for any contaminant that can be reasonably expected to be present in the dredged material.

c. Level 3 material is NOT authorized to be used or reused under this permit. Level 3 material is characterized by a contaminant level that is greater than any respective analyte concentrations listed in the Industrial SRV column for any contaminant that can be reasonably expected to be present in the dredged material.

3.44 The use or reuse of dredged material as beach nourishment is not authorized by this permit.

3.45 Storage Prior to Reuse. Storage of dredged material prior to reuse or use is subject to the temporary storage requirements of part 3.5 of this chapter, or the disposal requirements of parts 3.6 through 3.40 of this chapter, as applicable.

### **4. Sampling and Analyses**

4.1 Timing of sediment evaluation. Dredged material shall be evaluated for pollutant contamination prior to removal of sediment, and in accordance with the terms and conditions of this permit. Evaluation need not be repeated prior to final disposition, except in the case where co-mingling with other material has occurred at the treatment, storage, disposal and/or reuse site, and/or if additional analysis is specified by the MPCA.

4.2 Sampling location. Sample locations must properly characterize the dredged sediment.

4.3 Number of samples. Except for sieve grain size analysis, refer to Table 3 of Appendix 1 to this permit to determine the minimum number of samples required for sediment evaluation. Analysis must be conducted on samples that are representative of, and in consideration of the dredged material and activities at the project site. In some cases, the minimum number of samples indicated on Table 3 will not be adequate to obtain representative samples, and additional analysis may be required. For sieve grain size analysis, a minimum of six representative sediment samples is required. For samples demonstrating sediment composition equal to or greater than 93% sand, as evidenced by the analyte results for "Particle Size .05-2.0 mm Sand, Dry Weight", analysis of remaining analytes in the 'Limits and Monitoring' section of this permit is not required (Table 1 of the Appendix).

4.4 Based on the evaluation of historical land uses and the reasonable likelihood for pollutants in the sediment to be dredged, analysis of analytes beyond the baseline analytes (Table 1 of the Appendix) may be required. These additional analytes are listed in Table 2 of the Appendix.

## Chapter 5. Dredged Material Management

### 4. Sampling and Analyses

4.5 All of the following apply to sediment sampling at dredge project sites:

- a. Samples shall be managed in accordance with ASTM E1391-03 Standard Guide for Collection, Storage, Characterization, and Manipulation of Sediments for Toxicological Testing and for Selection of Samplers Used to Collect Benthic Invertebrates.
- b. All samples shall be taken with a core sampler, or another MPCA approved method.
- c. All sampling equipment shall be properly cleaned prior to and following each sample collection.
- d. The sieve grain size analysis shall be conducted using US Standard sieve numbers 10, 40, 100, and 200, and in accordance with ASTM Method D-422.
- e. Samples collected for PCB, pesticide and other organic analyses shall be collected and processed using metallic (stainless steel preferred) liners, tubs, spoons and spatulas. Samples collected for other chemical analysis, including heavy metals, shall be collected and processed using non-metallic liners, tubs, spoons and spatulas.
- f. Core samples from the dredging site shall be taken to the proposed dredging depth plus 2 feet, and shall be analyzed from each distinct layer observed in the material to be dredged. If no strata formation exists, core samples shall be divided into 2-foot segments, and each segment shall be analyzed for the required chemicals and characteristics. For cores extending into parent material, analysis of only the top 2-foot segment of parent material is required.
- g. Core samples shall be visually inspected for the existence of strata formation, and a written description including position, length, odor, texture and color of the strata shall be provided to the Agency.

4.6 Grain Size Analysis. To demonstrate that dredged material from a given project or site is predominantly sand, and is therefore unlikely to be contaminated, 93% of the dredged material must be coarser than silt. To make this determination, the following procedure must be used:

- a. Conduct a sieve grain analysis using ASTM Method C-136 for the gradation analysis and ASTM Method D-2487 for classification.
- b. Determine the minimum number of samples required using Table 3 in the Appendices section of this permit, based on the total amount of material to be dredged.
- c. Conduct the analysis using the following US Standard sieves: 1", 1/2", 3/8", #4, #10, #100 and #200.
- d. Report the results for each of the discrete sample locations as a mass percentage of retained sediments.

### 5. Annual Report

5.1 Submit an annual 'Dredged Material Report' by February 1 of each year following permit issuance, for the preceding calendar year. The Permittee shall provide this report even if no dredging occurred during the preceding calendar year. Report on the form provided by the MPCA in the Appendices section of this permit, or another MPCA approved form.

## Chapter 5. Dredged Material Management

### 5. Annual Report

- 5.2 The annual 'Dredged Material Report' shall be on a form provided by the MPCA, or another MPCA approved form, and shall include the following elements:
- a. Dates of dredging;
  - b. Volume of material placed into storage or disposal facility;
  - c. Any incidents, such as spills, unauthorized discharge and/or other permit violations which may have occurred;
  - d. Water level records for the disposal facilities of hydraulic dredging projects;
  - e. Such information as the MPCA may reasonably require of the Permittee pursuant to Minn. R. 7001 and Minn. Stat. chap. 115 and 116 as amended;
  - f. For disposal facilities, the dates of 'Periodic Site Inspections' required by part 3.21 of this chapter, and the status of erosion control measures at the disposal facility;
  - g. For disposal facilities, the dates, the volume of dredged material removed from the disposal facility, and the method and location of the disposition (disposal or reuse) of such materials.
  - h. For facilities that used or reused dredged material during the previous calendar year, the following information shall also be provided:
    - i. A written description of the use or reuse of the dredged material;
    - ii. A written determination of the use category and appropriate Soil Reference Values (SRVs), as described by part 3.42 of this chapter; and,
    - iii. The results of an evaluation of the level of contaminants in the dredged material proposed for reuse for the respective SRVs, as described in part 3.42 of this chapter.
- 5.3 Where a spill, unauthorized discharge and/or other violation occurred during the previous calendar year, a copy of the report generated or information submitted in accordance with part 1.31 and/or part 1.33 of the 'Total Facility Requirements' chapter shall be included in the annual 'Dredged Material Report'.

### 6. Definitions

- 6.1 "Agency" means the Minnesota Pollution Control Agency (MPCA).
- 6.2 "Beach Nourishment" means the disposal of dredged material on the beaches or in the water waterward starting at or above the Ordinary High Water Level (OHWL) for the purpose of adding to, replenishing, or preventing the erosion of, beach material.
- 6.3 "Beneficial Re-use" means the re-use of dredged material, after the material has been dewatered, in projects such as, but not limited to: road base, building base or pad, etc.
- 6.4 "Best Management Practices" (BMPs) means practices to prevent or reduce pollution of the waters of the state, including schedules of activities, prohibitions of practices, and other management practices and also includes treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge, or waste disposal or drainage from material storage, as defined in Minnesota Rules pt. 7001.1020, subp.5.
- 6.5 "Carriage, or Conveyance, Water" means the water portion of a slurry of water and dredged material.

## **Chapter 5. Dredged Material Management**

### **6. Definitions**

- 6.6 "Carriage Water Return Flow" means the carriage water which is returned to a receiving water after separation of the dredged material from the carriage water in a disposal, rehandling or treatment facility.
- 6.7 "Construction Activity" means a disturbance to the land that results in a change in the topography, existing soil cover (both vegetative and non-vegetative), or the existing soil topography that may result in accelerated stormwater runoff, leading to soil erosion and movement of sediment into waters of the state. Examples can include clearing, grading, filling and excavating.
- 6.8 "Design capacity" means the total volume of compacted dredged materials, along with any topsoil, intermittent, intermediate, and/or final cover, as calculated from final contour and cross-sectional plan sheets that define the areal and vertical extent of the fill area.
- 6.9 "Discharges of Dredged Material" means any addition of dredged material into waters of the state and includes discharges of water from dredged material disposal operations including beach nourishment, upland, or confined disposal which return to waters of state. Material resuspended during normal dredging operations is considered "de minimis" and is not a dredged material discharge.
- 6.10 "Disposal Facility" means a structure, site or area for the disposal of dredged material.
- 6.11 "Dredged Material" means any material removed from the bed of any waterway by dredging.
- 6.12 "Dredging" means any part of the process of the removal of material from the beds of waterways; transport of the material to a disposal, rehandling or treatment facility; treatment of the material; discharge of carriage or interstitial water; and disposal of the material.
- 6.13 "Erosion Control" means methods employed to prevent erosion. Examples include: soil stabilization practices, horizontal slope grading, temporary or permanent cover, and construction phasing. (look for SW definition)
- 6.14 "Final Stabilization" means that all soil disturbing activities at the site have been completed, and that a uniform perennial vegetative cover (a density of 70 percent cover for unpaved areas and areas not covered by permanent structures) has been established or equivalent permanent stabilization measures have been employed. Examples of vegetative cover practices can be found in Supplemental Specifications to the 1988 Standard Specifications for Construction (Minnesota Department of Transportation, 1991).
- 6.15 "Flood Event" means that the surface elevation of a waterbody has risen to a level that causes the inundation or submersion of areas normally above the Ordinary High Water Level.
- 6.16 "Grain Size Analysis" means a method to determine dredged material and disposal site sediment particle size distribution.
- 6.17 "Hazardous Waste" has the meaning given in Minn. Stat. section 116.06, subd. 11.
- 6.18 "Impervious Surface" means a constructed hard surface that either prevents or retards the entry of water into the soil and causes water to run off the surface in greater quantities and at an increased rate of flow than prior to development. Examples include: rooftops, sidewalks, patios, driveways, parking lots, storage areas, and concrete, asphalt, or gravel roads.
- 6.19 "Impoundment" means a natural or artificial body of water or sludge confined by a dam, dike, floodgate, or other barrier.
- 6.20 "Interstitial, or Pore, Water" means water contained in the interstices or voids of soil or rock in the dredged material.
- 6.21 "MPCA" means the Minnesota Pollution Control Agency, or Minnesota Pollution Control Agency staff as delegated by the Minnesota Pollution Control Agency.

## Chapter 5. Dredged Material Management

### 6. Definitions

- 6.22 "Ordinary High-Water Level (OHWL)" means the boundary of waterbasins, watercourses, public waters, and public waters wetlands, and shall be an elevation delineating the highest water level which has been maintained for a sufficient period of time to leave evidence upon the landscape, commonly that point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial. For watercourses, the ordinary high water level is the elevation of the top of the bank of the channel. For reservoirs and flowages, the ordinary high water level is the operating elevation of the normal summer pool. (Minn. Stat. chap. 103G.005 Subd. 14 and MN Rule 6120.2500 Subp. 11.)
- 6.23 "Permittee" means the entity identified as Permittee on the cover letter authorizing coverage under this permit.
- 6.24 "Pollutant" means any sewage, industrial waste, or other wastes, as defined in Minnesota Statutes permit 115.01, discharged into a disposal system or to waters of the state.
- 6.25 "Rehandling Facility" means a temporary storage site or facility used during the transportation of dredged material to a treatment or disposal facility.
- 6.26 "Run-off" means any liquid that drains over land from any part of a facility.
- 6.27 "Run-on" means any liquid that drains over land onto any part of a facility.
- 6.28 "Sediment" means the unconsolidated inorganic and organic material that is suspended in and being transported by surface water, or has settled out and has deposited into beds.
- 6.29 "Significant Storm Event" means a storm event that is greater than 1.0 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 1.0 inch rainfall) storm event. The 72-hour storm event interval may be waived where:
- a. the preceding measurable storm event did not result in a measurable discharge from the facility; or,
  - b. the Permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted.
- 6.30 "Stabilized" means staked sod, riprap, wood fiber blanket, or other material that prevents erosion from occurring has covered the exposed ground surface. Grass seed is not stabilization.
- 6.31 "Storage Facility" means a structure, site or area for the holding of dredged material for more than 48 hours in quantities equal to or greater than ten cubic yards. Storage for more than 1 year constitutes disposal.
- 6.32 "Treatment Facility" in this permit means a natural or artificial confinement structure, site or area used for the separation of dredged material solids from the interstitial or carriage water.
- 6.33 "Unconfined Disposal" means the deposition of dredged material, in water, on the bed of a waterway.
- 6.34 "Upland Disposal" means the disposal of dredged materials landward from the ordinary high-water level of a waterway or waterbody.
- 6.35 "Waters of the State" means all streams, lakes, ponds, marshes, wetlands, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof.
- 6.36 "Water table" means the surface of the ground water at which the pressure is atmospheric. Generally this is the top of the saturated zone.

## **Chapter 5. Dredged Material Management**

### **6. Definitions**

- 6.37 "Wetlands" means those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Constructed wetlands designed for wastewater treatment are not waters of the state. Wetlands must have the following attributes:
- a. a predominance of hydric soils;
  - b. inundated or saturated by surface water or groundwater at a frequency and duration to support a prevalence of hydrophytic vegetation typically adapted for life in a saturated soil condition; and,
  - c. under normal circumstances support a prevalence of such vegetation.

## **Chapter 6. Mercury Minimization Plan**

### **1. Mercury Pollutant Minimization Plan**

- 1.1 The Permittee is required to complete and submit a Mercury Pollutant Minimization Plan (MMP) to the MPCA as detailed in this section. If the Permittee has previously submitted a MMP, it must update its MMP and submit the updated MMP to the MPCA. The purpose of the MMP is to evaluate collection and treatment systems to determine possible sources of mercury as well as potential mercury reduction options. Guidelines for developing a MMP are detailed in this section.
- 1.2 The specific mercury monitoring requirements are detailed in the limits and monitoring section of this permit. Information gained through the MMP process can be used to reduce mercury concentrations. As part of its mercury control strategy, the Permittee should consider selecting activities based on the potential of those activities to reduce mercury loadings to the wastewater treatment facility.
- 1.3 The Permittee shall submit a Mercury Minimization Plan by 180 days before permit expiration. At a minimum, the MMP must include the following:
- a) A summary of mercury influent and effluent concentrations and biosolids monitoring data using the most recent five years of monitoring data, if available.
  - b) Identification of existing and potential sources of mercury concentrations and/or loading to the facility. You should also consider other influent mercury sources, such as stormwater inputs, ground water (inflow & infiltration) inputs, lift station components, and waste streams or sewer tributaries to the wastewater treatment facility.
  - c) An evaluation of past and present WWTF operations to determine those operating procedures that maximize mercury removal.
  - d) A summary of any mercury reduction activities implemented during the last five years.
  - e) A plan to implement mercury management and reduction measures during the next five years.



## **Chapter 7. Phosphorus Management Plan**

### **1. General Requirements**

- 1.1 The Permittee shall submit a Phosphorus Management Plan (PMP) or an updated PMP to the MPCA 180 days prior to permit expiration.

At a minimum, the PMP shall include the following:

- a. A summary of influent and effluent concentrations, mass loadings, and percent removal calculations using the most recent five years of monitoring data, if available.
- b. Identification of existing and potential sources of elevated phosphorus concentrations and/or loading to the facility. As appropriate for the facility, consider residential, institutional, municipal, and commercial sources.
- c. An evaluation of past and present WWTF operations to determine those operating procedures that maximize phosphorus removal.
- d. A summary of any phosphorus reduction activities implemented during the last five years.
- e. Phosphorus management and reduction goals for the next five years using the information collected in A through D above.
- f. A plan to implement phosphorus management and reduction measures during the next five years.

PMP guidance can be found on the MPCA internet at <http://www.pca.state.mn.us/enzq8fa> or by contacting the compliance staff listed on the cover page of this permit.

## **Chapter 8. Whole Effluent Toxicity (WET) Testing - Acute**

### **1. General Requirements**

- 1.1 This permit includes an acute whole effluent toxicity limit of 0.9999 TUA for Discharge 001. If the acute WET limit 0.9999 TUA is exceeded for any one WET test, the facility will be in violation of its permit. The facility will have to perform two WET retests to determine if a Toxicity Reduction Evaluation (TRE) is needed.
- 1.2 The Permittee shall conduct annual acute toxicity test batteries on Discharge SD001 beginning with the first full calendar year quarter following the issuance date of the permit. An annual acute WET test battery is required for each year of the permit, for the life of the permit. If the permit exceeded five years, there will be an additional WET test for each year that exceeds the five year permit cycle. The first set of annual acute WET battery results are due on the last day of the first full calendar quarter following permit issuance. Each of the other annual acute WET battery test are due on an annual basis within the same quarter the first acute WET test battery was submitted. (For example, if the permit is issued April 28, the first test battery is due by September 30th and each annual test battery is due by September 30th of each of the proceeding years for the life of the permit).

### **2. Species and Procedural Requirements**

- 2.1 Tests shall be conducted in accordance with procedures outlined in EPA-821-R-02-012 "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" - Fifth Edition (Acute Manual) and any revisions to the Manual. Any test that is begun with an effluent sample that is equal to or exceeds a total ammonia concentration of 5 mg/l shall use the carbon dioxide-controlled atmosphere technique to control pH drift.
- 2.2 Test organisms for each test battery shall include the fathead minnow (*Pimephales promelas*)-Method 2001.0, *Ceriodaphnia dubia*-Method 2002.0, and *Daphnia magna*-Method 2021.0.

## **Chapter 8. Whole Effluent Toxicity (WET) Testing - Acute**

### **2. Species and Procedural Requirements**

- 2.3 Static renewal acute serial dilution tests of the effluent shall consist of a control 12, 25, 50, 75 and 100 percent effluent.
- 2.4 All effluent samples shall be flow proportioned, 24-hour composite samples. Test solutions shall be renewed daily. Testing of the effluent shall begin within 36 hours of sample collection. Receiving water collected outside of the influence of discharge shall be used for dilution and controls.

### **3. Quality Control and Report Submittals**

- 3.1 Any test that does not meet quality control measures, or results which the Permittee believes reflect an artifact of testing shall be repeated within two (2) weeks. These reports shall contain information consistent with the report preparation section of the Acute Manual. The MPCA shall make the final determination regarding test validity.

### **4. Positive Toxicity Result for WET**

- 4.1 Should a test exceed 0.9999 TUa for whole effluent toxicity based on results from the most sensitive test species, the Permittee shall conduct two repeat test batteries on all species. The repeat tests are to be completed within forty-five (45) days after completion of the positive test. These tests will be used to determine if toxicity exceeding 0.9999 TUa remains present for any test species. For both retests, if no toxicity is present above 0.9999 TUa for any test species, the Permittee shall return to the test frequency specified by the permit. If either of the repeat test batteries indicate toxicity above 0.9999 TUa for any test species, the Permittee shall submit for MPCA review a plan for conducting a Toxicity Reduction Evaluation (TRE) including the Facility Performance Review (to be submitted to the MPCA WQ Submittals Center within 60 days after the toxicity discovery date), and at a minimum, provide quarterly reports, starting from the date of TRE plan submittal, regarding progress towards the identity, source, and any plans for the removal of the toxicity. The TRE shall be consistent with EPA guidance or subsequent procedures approved by the MPCA in attempting to identify and remove the source of the toxicity. Routinely scheduled acute toxicity test batteries required in this permit section shall be suspended for the duration of the TRE. The return to routine acute toxicity testing is subject to successful completion of conformation testing, as determined by the MPCA. Amendments to the initial TRE shall be approved by MPCA staff and the schedules identified therein.
- 4.2 Any other circumstances not addressed in the previous requirements or that require deviation from that specified in the previous requirements shall first be approved by the MPCA.

### **5. WET Data and Test Acceptability Criteria (TAC) Submittal**

- 5.1 All WET test data and TAC shall be submitted to the MPCA within 30 days receipt of the final laboratory toxicity report using the Minnesota Pollution Control Agency Acute Toxicity Test Report and associated instruction form. Data not submitted on the correct form, or submitted incomplete, will be returned to the Permittee and deemed incomplete until adequately submitted on the designated form (identified above). Data should be submitted to:

MPCA  
Attn: WQ Submittals Center  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

## **Chapter 8. Whole Effluent Toxicity (WET) Testing - Acute**

### **6. Whole Effluent Toxicity Requirement Definitions**

- 6.1 "Acute Whole Effluent Toxicity (WET) Toxicity Test" is a static renewal test conducted on an exponentially diluted series of effluent. The purpose is to calculate the proportion of effluent that causes 50 percent mortality/immobility of aquatic organisms at 48 daphnia magna and ceriodaphnia dubia or 96 hours for fathead minnows. An LC50 (lethal concentration) less than or equal to 100 percent effluent constitutes a positive for toxicity.
- 6.2 "Acute toxic unit (TUa)" is the reciprocal of the effluent dilution that causes the acute effect by the end of the acute exposure period. For example, a TUa equals  $(100\% \text{ effluent}) / (48 \text{ LC50 for daphnia magna and ceriodaphnia dubia or 96 hour LC50 for fathead minnows in } \%)$ .
- 6.3 "Test" refers to an individual species.
- 6.4 "Test Battery" consists of WET testing of all test species for the specified test. For acute WET testing, all test species includes Fathead minnows, daphnia magna, and ceriodaphnia dubia.

## **Chapter 9. Total Facility Requirements**

### **1. General Requirements**

#### **Chemical Additives**

- 1.1 The Permittee may submit a Chemical Additive Approval Procedure to the MPCA for review and approval during the five year permit term. The Permittee shall not implement the Chemical Additive Approval Procedure prior to written notification of approval of the procedure by MPCA.
- 1.2 The Chemical Additive Approval Procedure shall include the following:

A description of how the Permittee plans to evaluate chemical additives before increasing the use of a chemical additive authorized by this permit or previously approved by the MPCA, or using a new chemical additive not authorized by the permit or previously approved by the MPCA. "Chemical additive" includes processing reagents, water treatment products, cooling water additives, freeze conditioning agents, chemical frost suppressants, detergents and solvent cleaners used for equipment and maintenance cleaning, biocides and slimicides, among other materials.
- 1.3 The Chemical Additive Approval Procedure shall further specify how the Permittee will evaluate potential chemical additives to determine the impact in the following areas:
  - a. Evaluate the potential for impact on the wastewater treatment plant. Chemical additives that cause upset of the treatment processes or may cause exceedance of effluent limitations shall not be used, or used at a dosage that will preclude upset or any deterioration in performance of the wastewater treatment processes and will be below applicable effluent limitations. Mass balance assessments shall be completed to the extent needed to determine this evaluation.
  - b. Evaluate the potential for aquatic toxicity of the chemical additive that may be present in the treated effluent. Chemical additives which may cause acute toxicity in the effluent to applicable test species shall not be used, used at a dosage that is not acutely toxic in the effluent, or used at a dosage where wastewater treatment will render the chemical additive not acutely toxic in the effluent.
  - c. Evaluate the potential for adverse human health impacts, including human or mammalian toxicity, and evaluate suspected or known impacts related to carcinogenicity, and mutagenic and teratogenic effects. Chemical additives causing these effects shall not be used, used at dosages that do not produce these effects, or used where the wastewater treatment process will treat or remove the chemical additive to a level that will not produce these effects.

## **Chapter 9. Total Facility Requirements**

### **1. General Requirements**

- 1.4 The Chemical Additive Approval Procedure shall detail how the Permittee shall use the following information in conducting evaluation of a proposed additive:
- a. Material Safety Data Sheet.
  - b. A complete product use and instruction label.
  - c. The commercial and chemical names of all ingredients.
  - d. Aquatic toxicity and human health or mammalian toxicity data including a carcinogenic, mutagenic or teratogenic concern or rating.
  - e. Environmental fate information including, but not limited to, persistence, half-life, intermediate breakdown products, and bioaccumulation data.
  - f. The proposed method, concentration, and average and maximum rates of use.
  - g. If applicable, the number of cycles before wastewater bleedoff.
  - h. If applicable, the ratio of makeup flow to discharge flow.
- 1.5 The Chemical Additive Approval Procedure shall specify the engineering and/or toxicological skill set required by the qualified personnel that will evaluate potential chemical additives and shall identify qualified staff or contractors that may complete the evaluation.
- 1.6 Once approved, the Chemical Additive Approval Procedure shall become an enforceable part of this NPDES/SDS permit and henceforth the use of any chemical additive at a dosage equivalent to, or exceeding, the restrictions included in the MPCA approved Procedure shall not be used. In the event that the Permittee is uncertain of the potential impact of a chemical additive approval shall be obtained from the MPCA before using the chemical additive.
- 1.7 Once the Chemical Additive Approval Procedure is approved by MPCA staff the Permittee may use a new chemical additive or adjust the dosage of existing chemical additives after completing evaluations consistent with the approved procedures.

Until that point the Permittee shall comply with section 1.51 of this chapter related to MPCA approval of chemical additives.

- 1.8 After MPCA approval of the Chemical Additive Approval Procedure the Permittee shall maintain a record of chemical additive evaluations for changes in chemical additives used. The Permittee shall submit these evaluations for a chemical additive conducted in any month in the subsequent monthly discharge monitoring report (DMR). This permit may be modified to restrict the use or discharge of a chemical additive.

#### **General Requirements**

- 1.9 Incorporation by Reference. The following applicable federal and state laws are incorporated by reference in this permit, are applicable to the Permittee, and are enforceable parts of this permit: 40 CFR pts. 122.41, 122.42, 136, 403 and 503; Minn. R. pts. 7001, 7041, 7045, 7050, 7052, 7053, 7060, and 7080; and Minn. Stat. Sec. 115 and 116.
- 1.10 Permittee Responsibility. The Permittee shall perform the actions or conduct the activity authorized by the permit in compliance with the conditions of the permit and, if required, in accordance with the plans and specifications approved by the Agency. (Minn. R. 7001.0150, subp. 3, item E)

## Chapter 9. Total Facility Requirements

### 1. General Requirements

- 1.11 Toxic Discharges Prohibited. Whether or not this permit includes effluent limitations for toxic pollutants, the Permittee shall not discharge a toxic pollutant except according to Code of Federal Regulations, Title 40, sections 400 to 460 and Minnesota Rules 7050, 7052, 7053 and any other applicable MPCA rules. (Minn. R. 7001.1090, subp.1, item A)
- 1.12 Nuisance Conditions Prohibited. The Permittee's discharge shall not cause any nuisance conditions including, but not limited to: floating solids, scum and visible oil film, acutely toxic conditions to aquatic life, or other adverse impact on the receiving water. (Minn. R. 7050.0210 subp. 2)
- 1.13 Property Rights. This permit does not convey a property right or an exclusive privilege. (Minn. R. 7001.0150, subp. 3, item C)
- 1.14 Liability Exemption. In issuing this permit, the state and the MPCA assume no responsibility for damage to persons, property, or the environment caused by the activities of the Permittee in the conduct of its actions, including those activities authorized, directed, or undertaken under this permit. To the extent the state and the MPCA may be liable for the activities of its employees, that liability is explicitly limited to that provided in the Tort Claims Act. (Minn. R. 7001.0150, subp. 3, item O)
- 1.15 The MPCA's issuance of this permit does not obligate the MPCA to enforce local laws, rules, or plans beyond what is authorized by Minnesota Statutes. (Minn. R. 7001.0150, subp.3, item D)
- 1.16 Liabilities. The MPCA's issuance of this permit does not release the Permittee from any liability, penalty or duty imposed by Minnesota or federal statutes or rules or local ordinances, except the obligation to obtain the permit. (Minn. R. 7001.0150, subp.3, item A)
- 1.17 The issuance of this permit does not prevent the future adoption by the MPCA of pollution control rules, standards, or orders more stringent than those now in existence and does not prevent the enforcement of these rules, standards, or orders against the Permittee. (Minn. R. 7001.0150, subp.3, item B)
- 1.18 Severability. The provisions of this permit are severable and, if any provisions of this permit or the application of any provision of this permit to any circumstance are held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.
- 1.19 Compliance with Other Rules and Statutes. The Permittee shall comply with all applicable air quality, solid waste, and hazardous waste statutes and rules in the operation and maintenance of the facility.
- 1.20 Inspection and Entry. When authorized by Minn. Stat. Sec. 115.04; 115B.17, subd. 4; and 116.091, and upon presentation of proper credentials, the agency, or an authorized employee or agent of the agency, shall be allowed by the Permittee to enter at reasonable times upon the property of the Permittee to examine and copy books, papers, records, or memoranda pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activity covered by the permit; and to conduct surveys and investigations, including sampling or monitoring, pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activity covered by the permit. (Minn. R. 7001.0150, subp.3, item I)
- 1.21 Control Users. The Permittee shall regulate the users of its wastewater treatment facility so as to prevent the introduction of pollutants or materials that may result in the inhibition or disruption of the conveyance system, treatment facility or processes, or disposal system that would contribute to the violation of the conditions of this permit or any federal, state or local law or regulation.

#### Sampling

- 1.22 Representative Sampling. Samples and measurements required by this permit shall be conducted as specified in this permit and shall be representative of the discharge or monitored activity. (40 CFR 122.41 (j)(1))

## **Chapter 9. Total Facility Requirements**

### **1. General Requirements**

- 1.23 Additional Sampling. If the Permittee monitors more frequently than required, the results and the frequency of monitoring shall be reported on the Discharge Monitoring Report (DMR) or another MPCA-approved form for that reporting period. (Minn. R. 7001.1090, subp. 1, item E)
- 1.24 Certified Laboratory. A laboratory certified by the Minnesota Department of Health and/or registered by the MPCA shall conduct analyses required by this permit. Analyses of dissolved oxygen, pH, temperature, specific conductance, and total residual oxidants (chlorine, bromine) do not need to be completed by a certified laboratory but shall comply with manufacturers specifications for equipment calibration and use. (Minn. Stat. Sec. 144.97 through 144.98 and Minn. R. 4740.2010 and 4740.2050 through 4740.2120) (Minn. R. 4740.2010 and 4740.2050 through 2120)
- 1.25 Sample Preservation and Procedure. Sample preservation and test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and Minn. R. 7041.3200.
- 1.26 Equipment Calibration: Flow meters, pumps, flumes, lift stations or other flow monitoring equipment used for purposes of determining compliance with permit shall be checked and/or calibrated for accuracy at least twice annually. (Minn. R. 7001.0150, subp. 2, items B and C)
- 1.27 Maintain Records. The Permittee shall keep the records required by this permit for at least three years, including any calculations, original recordings from automatic monitoring instruments, and laboratory sheets. The Permittee shall extend these record retention periods upon request of the MPCA. The Permittee shall maintain records for each sample and measurement. The records shall include the following information (Minn. R. 7001.0150, subp. 2, item C):
- a. The exact place, date, and time of the sample or measurement;
  - b. The date of analysis;
  - c. The name of the person who performed the sample collection, measurement, analysis, or calculation; and
  - d. The analytical techniques, procedures and methods used; and
  - e. The results of the analysis.
- 1.28 Completing Reports. The Permittee shall submit the results of the required sampling and monitoring activities on the forms provided, specified, or approved by the MPCA. The information shall be recorded in the specified areas on those forms and in the units specified. (Minn. R. 7001.1090, subp. 1, item D; Minn. R. 7001.0150, subp. 2, item B)

Required forms may include:

#### **DMR Supplemental Form**

Individual values for each sample and measurement must be recorded on the DMR Supplemental Form which, if required, will be provided by the MPCA. DMR Supplemental Forms shall be submitted with the appropriate DMRs. You may design and use your own supplemental form; however it must be approved by the MPCA.

Note: Required summary information MUST also be recorded on the DMR. Summary information that is submitted ONLY on the DMR Supplemental Form does not comply with the reporting requirements.

## Chapter 9. Total Facility Requirements

### 1. General Requirements

- 1.29 Submitting Reports. Discharge Monitoring Reports (DMRs), DMR supplemental forms, and related attachments shall be submitted electronically via the MPCA Online Services Portal after authorization is approved. Authorization must be applied for and approved prior to submittal via the Online Services Portal.

DMRs and DMR Supplemental Forms shall be electronically submitted by the 21st day of the month following the monitoring period end or as otherwise specified in this permit. Electronic DMR submittal must be complete on or before 11:59 PM of the 21st day of the month following the end of the monitoring period or as otherwise specified in this permit. A DMR shall be submitted for each required station even if no discharge occurred during the monitoring period. (Minn. R. 7001.0150, subps. 2.B and 3.H)

If electronic submittal is not possible, the Permittee must apply for an exception to electronic submittal. Exceptions requests for extreme conditions (no computer on-site is not an extreme condition) must at a minimum contain the extreme reason for the exception, actions to be taken, and date the facility will submit eDMR. All exception requests, and paper DMRs, DMR supplemental forms, and related attachments must be submitted by the 21st day of the month following the monitoring period end to:

MPCA  
Attn: Discharge Monitoring Reports  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194.

Other reports required by this permit shall be submitted on or before the due date specified in the permit to:

MPCA  
Attn: WQ Submittals Center  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194.

- 1.30 Incomplete or Incorrect Reports. The Permittee shall immediately submit an electronically amended report or DMR to the MPCA upon discovery by the Permittee or notification by the MPCA that it has submitted an incomplete or incorrect report or DMR. The amended report or DMR shall contain the missing or corrected data along with a cover letter explaining the circumstances of the incomplete or incorrect report. If it is impossible to electronically amend the report or DMR, the Permittee shall immediately notify the MPCA and the MPCA will provide direction for the amendment submittals. (Minn. R. 7001.0150 subp. 3, item G)
- 1.31 Required Signatures. All DMRs, forms, reports, and other documents submitted to the MPCA shall be signed by the Permittee or the duly authorized representative of the Permittee. Minn. R. 7001.0150, subp. 2, item D. The person or persons that sign the DMRs, forms, reports or other documents must certify that he or she understands and complies with the certification requirements of Minn. R. 7001.0070 and 7001.0540, including the penalties for submitting false information. Technical documents, such as design drawings and specifications and engineering studies required to be submitted as part of a permit application or by permit conditions, must be certified by a registered professional engineer. (Minn. R. 7001.0540)

## **Chapter 9. Total Facility Requirements**

### **1. General Requirements**

- 1.32 Detection Level. The Permittee shall report monitoring results below the reporting limit (RL) of a particular instrument as "<" the value of the RL. For example, if an instrument has a RL of 0.1 mg/L and a parameter is not detected at a value of 0.1 mg/L or greater, the concentration shall be reported as "<0.1 mg/L." "Non-detected," "undetected," "below detection limit," and "zero" are unacceptable reporting results, and are permit reporting violations. (Minn. R. 7001.0150, subp. 2, item B)

Where sample values are less than the level of detection and the permit requires reporting of an average, the Permittee shall calculate the average as follows:

- a. If one or more values are greater than the level of detection, substitute zero for all nondetectable values to use in the average calculation.
  - b. If all values are below the level of detection, report the averages as "<" the corresponding level of detection.
  - c. Where one or more sample values are less than the level of detection, and the permit requires reporting of a mass, usually expressed as kg/day, the Permittee shall substitute zero for all nondetectable values. (Minn. R. 7001.0150, subp. 2, item B)
- 1.33 Records. The Permittee shall, when requested by the Agency, submit within a reasonable time the information and reports that are relevant to the control of pollution regarding the construction, modification, or operation of the facility covered by the permit or regarding the conduct of the activity covered by the permit. (Minn. R. 7001.0150, subp. 3, item H)
- 1.34 Confidential Information. Except for data determined to be confidential according to Minn. Stat. Sec. 116.075, subd. 2, all reports required by this permit shall be available for public inspection. Effluent data shall not be considered confidential. To request the Agency maintain data as confidential, the Permittee must follow Minn. R. 7000.1300.

### **Noncompliance and Enforcement**

- 1.35 Subject to Enforcement Action and Penalties. Noncompliance with a term or condition of this permit subjects the Permittee to penalties provided by federal and state law set forth in section 309 of the Clean Water Act; United States Code, title 33, section 1319, as amended; and in Minn. Stat. Sec. 115.071 and 116.072, including monetary penalties, imprisonment, or both. (Minn. R. 7001.1090, subp. 1, item B)
- 1.36 Criminal Activity. The Permittee may not knowingly make a false statement, representation, or certification in a record or other document submitted to the Agency. A person who falsifies a report or document submitted to the Agency, or tampers with, or knowingly renders inaccurate a monitoring device or method required to be maintained under this permit is subject to criminal and civil penalties provided by federal and state law. (Minn. R. 7001.0150, subp. 3, item G., 7001.1090, subps. 1, items G and H and Minn. Stat. Sec. 609.671)
- 1.37 Noncompliance Defense. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (40 CFR 122.41(c))



## Chapter 9. Total Facility Requirements

### 1. General Requirements

1.38 Effluent Violations. If sampling by the Permittee indicates a violation of any discharge limitation specified in this permit, the Permittee shall immediately make every effort to verify the violation by collecting additional samples, if appropriate, investigate the cause of the violation, and take action to prevent future violations. If the permittee discovers that noncompliance with a condition of the permit has occurred which could endanger human health, public drinking water supplies, or the environment, the Permittee shall within 24 hours of the discovery of the noncompliance, orally notify the commissioner and submit a written description of the noncompliance within 5 days of the discovery. The written description shall include items a. through e., as listed below. If the Permittee discovers other non-compliance that does not explicitly endanger human health, public drinking water supplies, or the environment, the non-compliance shall be reported during the next reporting period to the MPCA with its Discharge Monitoring Report (DMR). If no DMR is required within 30 days, the Permittee shall submit a written report within 30 days of the discovery of the noncompliance. This description shall include the following information:

- a. a description of the event including volume, duration, monitoring results and receiving waters;
- b. the cause of the event;
- c. the steps taken to reduce, eliminate and prevent reoccurrence of the event;
- d. the exact dates and times of the event; and
- e. steps taken to reduce any adverse impact resulting from the event. (Minn. R. 7001.0150, subp. 3k)

1.39 Upset Defense. In the event of temporary noncompliance by the Permittee with an applicable effluent limitation resulting from an upset at the Permittee's facility due to factors beyond the control of the Permittee, the Permittee has an affirmative defense to an enforcement action brought by the Agency as a result of the noncompliance if the Permittee demonstrates by a preponderance of competent evidence:

- a. The specific cause of the upset;
- b. That the upset was unintentional;
- c. That the upset resulted from factors beyond the reasonable control of the Permittee and did not result from operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or increases in production which are beyond the design capability of the treatment facilities;
- d. That at the time of the upset the facility was being properly operated;
- e. That the Permittee properly notified the Commissioner of the upset in accordance with Minn. R. 7001.1090, subp. 1, item I; and
- f. That the Permittee implemented the remedial measures required by Minn. R. 7001.0150, subp. 3, item J.

### Release

1.40 Unauthorized Releases of Wastewater Prohibited. Except for discharges from outfalls specifically authorized by this permit, overflows, discharges, spills, or other releases of wastewater or materials to the environment, whether intentional or not, are prohibited. However, the MPCA will consider the Permittee's compliance with permit requirements, frequency of release, quantity, type, location, and other relevant factors when determining appropriate action. (40 CFR 122.41 and Minn. Stat. Sec 115.061)

## **Chapter 9. Total Facility Requirements**

### **1. General Requirements**

1.41 Discovery of a release. Upon discovery of a release, the Permittee shall:

- a. Take all reasonable steps to immediately end the release.
- b. Notify the Minnesota Department of Public Safety Duty Officer at 1(800)422-0798 or (651)649-5451 (metro area) immediately upon discovery of the release. You may contact the MPCA during business hours at 1(800)657-3864 or (651)296-6300 (metro area).
- c. Recover as rapidly and as thoroughly as possible all substances and materials released or immediately take other action as may be reasonably possible to minimize or abate pollution to waters of the state or potential impacts to human health caused thereby. If the released materials or substances cannot be immediately or completely recovered, the Permittee shall contact the MPCA. If directed by the MPCA, the Permittee shall consult with other local, state or federal agencies (such as the Minnesota Department of Natural Resources and/or the Wetland Conservation Act authority) for implementation of additional clean-up or remediation activities in wetland or other sensitive areas.

1.42 Sampling of a release. Upon discovery of a release, the Permittee shall:

- a. Collect representative samples of the release. The Permittee shall sample the release for parameters of concern immediately following discovery of the release. The Permittee may contact the MPCA during business hours to discuss the sampling parameters and protocol. In addition, Fecal Coliform Bacteria samples shall be collected where it is determined by the Permittee that the release contains or may contain sewage. If the release cannot be immediately stopped, the Permittee shall consult with MPCA regarding additional sampling requirements. Samples shall be collected at least, but not limited to, two times per week for as long as the release continues.
- b. Submit the sampling results on the Release Sampling Form (<http://www.pca.state.mn.us/index.php/view-document.html?gid=18867>). The Release Sampling Form shall be submitted to the MPCA with the next DMR or within 30 days whichever is sooner.

#### **Bypass**

1.43 Anticipated bypass. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if the bypass is for essential maintenance to assure efficient operation of the facility. The permittee shall submit prior notice, if possible at least ten days before the date of the bypass to the MPCA (40 CFR 122.41(m)(2) and 122.41(m)(3) and Minn. R. Ch. 7001.1090, subp. 1, J).

The notice of the need for an anticipated bypass shall include the following information:

- a. The proposed date and estimated duration of the bypass;
- b. The alternatives to bypassing; and
- c. A proposal for effluent sampling during the bypass. Any bypass wastewater must enter waters of the state from outfalls specifically authorized by this permit. Therefore, samples shall be collected at the frequency and location identified in this permit or two times per week for as long as the bypass continues, whichever is more frequent.

## Chapter 9. Total Facility Requirements

### 1. General Requirements

- 1.44 All other bypasses are prohibited. The MPCA may take enforcement action against the Permittee for a bypass, unless the specific conditions described in Minn. R. Ch. 7001.1090 subp. 1, K and 122.41(m)(4)(i) are met.

In the event of an unanticipated bypass, the permittee shall:

- a. Take all reasonable steps to immediately end the bypass.
- b. Notify the Minnesota Department of Public Safety Duty Officer at 1(800)422-0798 or (651)649-5451 (metro area) immediately upon commencement of the bypass. You may contact the MPCA during business hours at 1(800)657-3864 or (651)296-6300 (metro area). (Minn. Stat. Sec 115.061)
- c. Immediately take action as may be reasonably possible to minimize or abate pollution to waters of the state or potential impacts to human health caused thereby. If directed by the MPCA, the Permittee shall consult with other local, state or federal agencies for implementation of abatement, clean-up, or remediation activities.
- d. Only allow bypass wastewater as specified in this section to enter waters of the state from outfalls specifically authorized by this permit. Samples shall be collected at the frequency and location identified in this permit or two times per week for as long as the bypass continues, whichever is more frequent. The permittee shall also follow the reporting requirements for effluent violations as specified in this permit.

### Operation and Maintenance

- 1.45 The Permittee shall at all times properly operate and maintain the facilities and systems of treatment and control, and the appurtenances related to them which are installed or used by the Permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. The Permittee shall install and maintain appropriate backup or auxiliary facilities if they are necessary to achieve compliance with the conditions of the permit and, for all permits other than hazardous waste facility permits, if these backup or auxiliary facilities are technically and economically feasible Minn. R. 7001.0150, subp. 3, item F.
- 1.46 In the event of a reduction or loss of effective treatment of wastewater at the facility, the Permittee shall control production or curtail its discharges to the extent necessary to maintain compliance with the terms and conditions of this permit. The Permittee shall continue this control or curtailment until the wastewater treatment facility has been restored or until an alternative method of treatment is provided. (Minn. R. 7001.1090, subp. 1, item C)
- 1.47 Solids Management. The Permittee shall properly store, transport, and dispose of biosolids, septage, sediments, residual solids, filter backwash, screenings, oil, grease, and other substances so that pollutants do not enter surface waters or ground waters of the state. Solids should be disposed of in accordance with local, state and federal requirements. (40 CFR 503 and Minn. R. 7041 and applicable federal and state solid waste rules)
- 1.48 Scheduled Maintenance. The Permittee shall schedule maintenance of the treatment works during non-critical water quality periods to prevent degradation of water quality, except where emergency maintenance is required to prevent a condition that would be detrimental to water quality or human health. (Minn. R. 7001.0150, subp. 3, item F and Minn. R. 7001.0150, subp. 2, item B)
- 1.49 Control Tests. In-plant control tests shall be conducted at a frequency adequate to ensure compliance with the conditions of this permit. (Minn. R. 7001.0150, subp. 3, item F and Minn. R. 7001.0150, subp. 2, item B)

### Changes to the Facility or Permit

## Chapter 9. Total Facility Requirements

### 1. General Requirements

- 1.50 Permit Modifications. Except as provided under Minnesota Statutes, section 115.07, subdivisions 1 and 3, no person required by statute or rule to obtain a permit may construct, install, modify, or operate the facility to be permitted, nor shall a person commence an activity for which a permit is required by statute or rule until the agency has issued a written permit for the facility or activity. (Minn. R. 7001.0030)

Permittees that propose to make a change to the facility or discharge that requires a permit modification must follow Minn. R. 7001.0190. If the Permittee cannot determine whether a permit modification is needed, the Permittee must contact the MPCA prior to any action. It is recommended that the application for permit modification be submitted to the MPCA at least 180 days prior to the planned change.

- 1.51 No person required by statute or rule to obtain a permit may construct, install, modify, or operate the facility to be permitted except as provided under Minnesota Statutes, section 115.07, subdivisions 1 and 3, nor shall a person commence an activity for which a permit is required by statute or rule until the agency has issued a written permit for the facility or activity.
- 1.52 Plans, specifications and MPCA approval are not necessary when maintenance dictates the need for installation of new equipment, provided the equipment is the same design size and has the same design intent. For instance, a broken pipe, lift station pump, aerator, or blower can be replaced with the same design-sized equipment without MPCA approval.

If the proposed construction is not expressly authorized by this permit, it may require a permit modification. If the construction project requires an Environmental Assessment Worksheet under Minn. R. 4410, no construction shall begin until a negative declaration is issued and all approvals are received or implemented.

- 1.53 Report Changes. The Permittee shall give advance notice as soon as possible to the MPCA of any substantial changes in operational procedures, activities that may alter the nature or frequency of the discharge, and/or material factors that may affect compliance with the conditions of this permit. (Minn. R. 7001.0150, subp. 3, item M)
- 1.54 Chemical Additives. The Permittee shall receive prior written approval from the MPCA before increasing the use of a chemical additive authorized by this permit, or using a chemical additive not authorized by this permit, in quantities or concentrations that have the potential to change the characteristics, nature and/or quality of the discharge.

The Permittee shall request approval for an increased or new use of a chemical additive at least 60 days, or as soon as possible, before the proposed increased or new use.

This written request shall include at least the following information for the proposed additive:

- a. The process for which the additive will be used;
- b. Material Safety Data Sheet (MSDS) which shall include aquatic toxicity, human health, and environmental fate information for the proposed additive. The aquatic toxicity information shall include at minimum the results of: a) a 48-hour LC50 or EC50 acute study for a North American freshwater planktonic crustacean (either Ceriodaphnia or Daphnia sp.) and b) a 96-hour LC50 acute study for rainbow trout, bluegill or fathead minnow or another North American freshwater aquatic species other than a planktonic crustacean;
- c. A complete product use and instruction label;
- d. The commercial and chemical names and Chemical Abstract Survey (CAS) number for all ingredients in the additive (If the MSDS does not include information on chemical composition, including percentages for each ingredient totaling to 100%, the Permittee shall contact the supplier to have this information provided); and
- e. The proposed method of application, application frequency, concentration, and daily average and maximum rates of use. (Minn. R. 7001.0170)

## Chapter 9. Total Facility Requirements

### 1. General Requirements

- 1.55 Upon review of the information submitted regarding the proposed chemical additive, the MPCA may require additional information be submitted for consideration. This permit may be modified to restrict the use or discharge of a chemical additive and include additional influent and effluent monitoring requirements.

Approval for the use of an additive shall not justify the exceedance of any effluent limitation nor shall it be used as a defense against pollutant levels in the discharge causing or contributing to the violation of a water quality standard.

- 1.56 MPCA Initiated Permit Modification, Suspension, or Revocation. The MPCA may modify or revoke and reissue this permit pursuant to Minn. R. 7001.0170. The MPCA may revoke without reissuance this permit pursuant to Minn. R. 7001.0180.
- 1.57 TMDL Impacts. Facilities that discharge to an impaired surface water, watershed or drainage basin may be required to comply with additional permits or permit requirements, including additional restriction or relaxation of limits and monitoring as authorized by the CWA 303(d)(4)(A) and 40 CFR 122.44.1.2.i., necessary to ensure consistency with the assumptions and requirements of any applicable US EPA approved wasteload allocations resulting from Total Maximum Daily Load (TMDL) studies.
- 1.58 Permit Transfer. The permit is not transferable to any person without the express written approval of the Agency after compliance with the requirements of Minn. R. 7001.0190. A person to whom the permit has been transferred shall comply with the conditions of the permit. (Minn. R., 7001.0150, subp. 3, item N)
- 1.59 Facility Closure. The Permittee is responsible for closure and post-closure care of the facility. The Permittee shall notify the MPCA of a significant reduction or cessation of the activities described in this permit at least 180 days before the reduction or cessation. The MPCA may require the Permittee to provide to the MPCA a facility Closure Plan for approval.

Facility closure that could result in a potential long-term water quality concern, such as the ongoing discharge of wastewater to surface or ground water, may require a permit modification or reissuance.

The MPCA may require the Permittee to establish and maintain financial assurance to ensure performance of certain obligations under this permit, including closure, post-closure care and remedial action at the facility. If financial assurance is required, the amount and type of financial assurance, and proposed modifications to previously MPCA-approved financial assurance, shall be approved by the MPCA. (Minn. Stat. Sec. 116.07, subd. 4)

## **Chapter 9. Total Facility Requirements**

### **1. General Requirements**

1.60 Permit Reissuance. If the Permittee desires to continue permit coverage beyond the date of permit expiration, the Permittee shall submit an application for reissuance at least 180 days before permit expiration. If the Permittee does not intend to continue the activities authorized by this permit after the expiration date of this permit, the Permittee shall notify the MPCA in writing at least 180 days before permit expiration.

If the Permittee has submitted a timely application for permit reissuance, the Permittee may continue to conduct the activities authorized by this permit, in compliance with the requirements of this permit, until the MPCA takes final action on the application, unless the MPCA determines any of the following (Minn. R. 7001.0040 and 7001.0160):

- a. The Permittee is not in substantial compliance with the requirements of this permit, or with a stipulation agreement or compliance schedule designed to bring the Permittee into compliance with this permit;
- b. The MPCA, as a result of an action or failure to act by the Permittee, has been unable to take final action on the application on or before the expiration date of the permit;
- c. The Permittee has submitted an application with major deficiencies or has failed to properly supplement the application in a timely manner after being informed of deficiencies.

APR 29 2014

WN-16J

Jeff Udd, Supervisor  
Water Quality Permits Unit  
Industrial Division  
Minnesota Pollution Control Agency  
525 Lake Avenue South, Suite 400  
Duluth, MN 55802

Re: U.S. Environmental Protection Agency Review of pre public notice draft NPDES Permit, St. Paul Park Refining Co. LLC, St. Paul Park, MN, Permit No. MN0000256

Dear Mr. Udd:

The U.S. Environmental Protection Agency has reviewed the pre-public notice draft National Pollutant Discharge Elimination System Permit (Permit), fact sheet, and supporting documents for the St. Paul Park Refining Co. LLC submitted to EPA on February 20, 2014, and subsequent revision in respond to EPA's comments submitted on April 14, 2014 via email. Based on our review to date, EPA would not object to issuance of the revised draft permit provided the following changes, which are agreed by the permit writer on April 23, 2014, are incorporated into the public notice permit.

- The Effluent Limitation Tables, the revised draft permit shall change to the monthly average mass limits instead of the quarterly average mass limits for hexavalent chromium and total chromium to comply with technology-based effluent limits of 40 CFR Part 419, Petroleum Refining Point Source Category, Subpart B, Cracking Subcategory.
- This facility registers/ranks at 85% high on the scale for environmental justice concerns. We recommend the permittee and MPCA continue to engage the affected community through the enhanced notification process and procedures when publish notice the draft permit.

However, our position could change if the following occurs.

- a. Prior to the actual date of issuance of a Proposed Permit, an effluent guideline or standard is promulgated which is applicable to the permit and which would require revision or modification of a limitation or condition set forth in the Draft Permit;

- b. A variance is granted and the Permit is modified to incorporate the results of that variance;
- c. There are additional revisions to be incorporated into the Permit which have not been agreed to by EPA; or
- d. EPA learns of new information, including as the result of public comment, that causes EPA to reconsider its position.

Subject to the above conditions, the permit may be issued in accordance with the Memorandum of Agreement and pursuant to the Clean Water Act.

When the draft Permit is public noticed, please forward one copy of the public notice to this office at the above address, attention David Soong, NPDES Programs Branch. Please also forward the permit that MPCA ultimately decides to issue with an indication as to whether that permit differs in any way from the April 14, 2014, draft Permit as amended by MPCA's April 23, 2014 email, MPCA submitted to EPA, along with any significant comments received during the public comment period, to the same address. If you have any technical questions related to EPA's review, please contact David Soong of my staff. David Soong can be reached by telephone at (312) 886-0136 or by Email at [soong.david@epa.gov](mailto:soong.david@epa.gov).

Thank you for your cooperation during the review process.

Sincerely,

D.S. 4/28

Kevin M. Pierard, Chief  
NPDES Programs Branch

cc: Robert Kostinec, MPCA

bcc: D. Soong, WN-16J  
Reading file